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AN  
INTRODUCTION  
TO THE  
Whole PRACTICE  
OF  
PHYSICK.

Shewing the Natures and Faculties of Medicines, the Reason and Manner of their Operations, and to what Particular Parts they are appropriated.

Directing the more Unskilful in the true Method of Physick; according to the most successful Practice of several Modern Physicians in General, and of the late Famous Dr *Willis* in Particular: being chiefly a Translation of the renowned *Wedelius*, Publick Professor of Physick, and Physician to the Duke of *Saxony*, &c.

L O N D O N,

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TO THE  
**READER.**

**T**HIS Book, which I have translated, having been recommended to me by many Physicians, that heartily desired my Improvement in that Study, I immediately made search for it, and with some difficulty found it; and having applied myself to the reading of it, it was not easy for me, because of the vast Profit and Pleasure I found thereby to give off, till I had read it over; which being done, I heartily blessed God, for the use of such a Treasure; but not being content to have  
read

*To the Reader.*

read it once, I read it over again, and took Notes out of it, and 'twas then first I thought I might write, Physician; for I had read many Books before, yet none, no, nor all together, did, or could give me such Improvement; for here you have all the Ways of knowing and giving Judgment of the Virtues of all Medicaments by rational Ways and Means, which plainly lead you to a firm and undoubted Science thereof. Here you have also the true Reasons and Manner of their diverse Applications, that a Man, after he has made this Book his own, by a careful Study of it, will be so enlightened and directed in all his Practice, that it will justly give him assurance of his Acting aright, in all the Administrations thereof. But some will say, Why should you translate so Excellent a Book, and make it common to the Silly and Unlearned

*To the Reader.*

ed Quacks? My Answer is, That 'tis come to that pass now, that their Numbers can hardly be increased by translating of Books, or any other means, and seeing this Nation is so unhappy, as to swarm with those Miscreants after such a rate, and no hopes of diminishing their Numbers, but by a new Act of Parliament ( which God put into the Hearts of this Excellent, Loyal and Wise Senate, that we are to be suddenly blessed with, ) I judged it no small Act of Charity ( seeing they are no way hindered to Practise ) to inform them better, that thereby I might conduce to the saving of many Lives, which by their Ignorance they would otherwise inevitably destroy. And now, that it comes to my Mind, I would have the World, but especially every good and charitable Member of the ensuing Parliament, take notice, that by a just and easy Computation,

*To the Reader.*

putation, which I have often made, and am still ready to make, upon any good occasion, it is found, that all the Plagues that happen'd in *England*, have not destroyed as many, as the Quacks and Empyricks of this Nation. Let him therefore that would avert the Plague, if in his Power, by a stronger Reason endeavour to avert this greater Mischief: Which is in it self possible; in the meantime the best thing Physicians can do, will be to inform them what they can, to prevent (what in them lies) their destroying of the King's good Subjects; for seeing the Nation is top-full of them, that it cannot well be more stocked with them, that is (as I said before) the only Remedy left (in some measure) to prevent the Murthers. I had, to confess the plain truth, another Reason which induced me to translate this Book, and it was To get a little Money, which other-

*To the Reader.*

otherwise I could not do by my Profession, because of the Quacks; and to make my Market the better, I chose the best of Books, or I should have been no wise Trader, and had my Labour for my Pains, which I could not fear in translating so Excellent and Useful a Book. Which I have made somewhat the more so, by explaining at large all the Chymical, and other difficult Characters contained therein, and by manifesting the Sense of many difficult Places.

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BOOK



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 BOOK I. SECT. I.
 

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## CHAP. I.

*Of the Faculties and Vertues of Simple Medicaments in General, in respect of their Principles of Acting.*

**T**He Word *Medicament* is applied in a large sense to *Aliments* and *Poysons*; but a *Medicament* is properly that which alters our Bodies into a better Condition.

*Aliments, Medicaments and Poysons* do differ several ways.

1. In respect of their *Ends*; the end of *Medicaments* and *Aliments* is good, nor have they any bad effect, but by accident; the end of *Poysons* is bad, nor have they any good effect, but by accident.

2. In respect of their *Subject*, or the Body on which they act, for *Aliments* are concocted and assimilated; *Medicaments* are actuated, and overcome by the Body; *Poysons* are direct *Adversaries* to the Body, and overcome it.

3. In respect of their *Actions* and *Qualities*; *Aliments* nourish, *Medicaments* alter, *Poysons* corrupt

rupt and destroy. So that Aliments are like the Body, Medicaments different from it, Poysons contrary to it.

*Aliments* keep the Body in the same state, but sometimes alter it by accident, when they are either faulty in their own Nature, or in respect of our Heat; and that either in quantity or quality. Therefore *Plutarch* says, that we dye and contract Diseases by those things that maintain life: *Medicaments* are such as alter the Body from a worse state to a better.

All the three have their power of Acting, either *actually* in them, or else only *potentially*; those that are endowed with an actual Power, manifest it to the external Senses, as Fire is manifestly hot, Water moist, &c. Those that have a power of Acting only potentially in them do exert their Qualities into Act, when they are applyed or administered, as they are actuated by our natural Heat: Therefore let it stand as an undoubted Rule,

*That the Force, Qualities, and Effects of all Medicaments are to be measured from the actuating of the natural Heat.* The same is to be said of Aliments and Poysons.

1. Medicaments considered in respect of their mixture are either *simple* or *compound*. 2. In respect of their preparation they are either *crude* or *prepared*. 3. In respect of the application of them, and so they are either *internal* or *external*.

*Simple* Medicaments are those that kind Nature affords of it self, without any help of Art, as Minerals, Animals or Vegetables, or any thing belonging to either of them or growing to them, as Mushromes, Jewes-ears, &c. Marine things, as Coral, Perl, &c. are referred to Minerals.

*Compound* Medicaments are those which are artificially mixed.

*Crude*



*Crude* things are those which are not at all prepared by Art.

*Prepared* things are those about which some art hath been used. There is a more simple preparation, as powdering, grinding, and such like; and a more select preparation, as Extraction, Destillation, &c.

*Simple* and *Prepared* denote one thing, *Compound* two or more joyned together: as to Application some are internal, some external, and some serve both ways.

*Alteration* in this place comprehends evacuation, and all the alteration which happens in Diseases of conformation and solution of Unity; tho sometimes they are contradistinguished.

But seeing all alteration is from Qualities, for every thing acts or causes alterations, by reason of some quality; let us endeavour to attain to a good knowledge of them and their actions.

Therefore for better distinctions sake: 1. We will consider *their Principles of Acting*: 2. *The Principles of knowing them*.

*The Principles of Acting* in Medicaments are *Qualities*; for Quantity as such has no efficacy, nor is Substance it self said to act, but abusively and respectively; as those things are said to act by their whole Substance, which by the whole frame and texture of them do produce this or that effect.

Therefore *Qualities* (according to the usual distinction,) are either *manifest* or *occult*. The manifest are either *first*, or *second*, or *third*: the first are either *active* or *passive*, the Active are *heat* and *cold*, the Passive *moisture* and *dryness*.

Here let us make a small stop, for being about to remove what may seem to oppose this

Doctrine, we will note the following *Axioms*.

I. *The Doctrine of Qualities, and Temperaments thence arising, is not to be contemned.* For notwithstanding all that *Paracelsus*, and his follower *Van Helmont*, and many of the modern Physicians can say to the contrary, seeing the Parts of Humane Bodys which are furnished with Heat are the subject of Physick, it is impossible that we should so solidly proceed in succouring of the sick without this kind of knowledg: therefore it is best to retain these Notions of Qualities, and to explain them rightly. We shall not inquire who first introduced this Doctrine, but leave that to Philosophers and proceed in our business.

II. *Medicaments are called or accounted hot, moist, cold, or dry, upon the bare intuition of the respect which they bear to, and the effect they have upon the natural Heat.* This is so apparent that it needs no proof. As long as a Man lives he is actually hot, but sometimes this heat is more remiss, obscure and unrestraint; and at other times it grows more intense, by a degree of Heat added to it: Therefore we see that some Medicaments do increase the Heat, and the sulphureous Parts of our Blood, and other Medicaments depress them; those are called Heaters, these Coolers: But note,

III. *That Qualities are considered either in actu signato, or exercito; if you consider them in the first sense, 'tis the same thing as to have a Quality actually in it self, the very Senses testifying it; but if in the second sense, then such Qualities are only apparent from their effects; as they acquire a power of altering, by being actuated by the natural Heat; hence results either intension or remission.*

IV. *First*

IV. *First Qualities* are so called, not so much in respect of other Qualities, that proceed from them, as in respect of the Body. Because they chiefly affect; they are primary, they testify of other Qualities, and are their internuncio's. So that they are first in knowledg, the last in action; for 'tis from colour, scent, acrimony, austerity, &c. that we gather a mixt Body to bear such and such respect to our natural Heat. They are said to be the first, because better known; and those second and third, which are collected out of them.

V. *First Qualities* are not to be considered abstractively. As if by an inverted order we should superstitiously attend to only calidity, frigidity, humidity and siccity; without a notion of mixture, and other Qualities which do produce this first Quality; but in the concrete and collectively with others, as the mixt Body is thus or thus disposed: For examples sake, acrimony, oyliness and saltness do signifie Heat; and earthyness, watryness and acidity do signifie Cold, and so either attenuating, inciding, astringent, or some thing else: according to the severall significations.

VI. *Qualities* are therefore to be looked upon when, and how they respect one another, and one results out of other, and either establish or take away each other, with a primary Respect had to our Bodies. For as they keep a proportion and symmetry among themselves, so they affect the Body one way or other: hence (which is chiefly the business of this place)

VII. *Qualities* are to be considered as Marks or Guides, and as Effects. Which we shall consider in order.

In first Qualities the Active, viz. Calidity and Frigidity, the Passive, viz. Humidity and Siccity

being considered abstractively, are as Guides and Marks, as the Philosophers most of all consider them: the effect is alteration, to heat, to cool, to moisten, to dry, and that effect is either univocal or equivocal. Hence whatsoever is actually hot, doth heat; so also doth whatsoever is potentially hot, of a biting quality or oily, increase heat (and that univocally) for the Cause is a token or mark of its effect, whatsoever is moist or watry doth increase the Serum or Moisture of the Blood, and doth dilute it; yet this doth not hinder, but that some hot things may cool the Blood by an equivocal effect, as Camphire sometimes doth by promoting exhalation, and nitrous things as they tame, and obtund the Sulphur of the Blood.

These Qualities do alter things either absolutely and in general, or as compared one to another; for that which has the Power and Quality of heating doth exert it upon all occasions, when its vertue is not impeded; so that Baulm which is a Cephalick and Cordial, doth also warm the Stomach, the Liver, the Blood, &c. Or they heat comparatively in respect of these, or other Parts of the Body, which have more or less of natural Heat; hence in some respects things came to be called Cephalick, Stomachical, Hepatick, &c. and these they call occult Qualities, as we shall hereafter more at large explain.

As for second Qualities some refer others to them, which made *Plempius* divide all Qualities into first and second, but we will retain, and better explain the common Doctrine: for next after heat, or the first Active Qualities or Passive, the frame and texture of the mixt Body occurs to the Senses, and the Disposition of the Particles and Pores; hence some external things are as Guides  
and

and Tokens, as rarity, density, tenuity, softness, hardness, roughness, smoothness, clamminess, gravity or levity are such in respect of weight, contact, consistence; but as effects, emolition, incision, incrassation, rarefaction, rubefaction, are Guides, which last is from asperity or roughness. Whatsoever therefore doth harden, bind, thicken or soften, or perform one, or two, or more of these Operations, is said to act by second Qualities.

Furthermore, as third Qualities, colours, smells and tastes, do offer themselves as Guides and Marks, of which we shall speak by and by; some put in sound among them; the following are said to act by third Qualities, *viz.* Resolvents, Diureticks, movers of the *Menses*, those that renew flesh, vulneraries, sudorificks, worm killers, &c. yet not neglecting the consideration of former Qualities.

Hence it comes to pass, that when you cannot equally and alike refer all Effects to Qualities that are manifest, as for example sake, when the force or vertue of Purging, of giving a Vomit, of increasing Milk, of resisting Poysons in those Medicaments that are endowed with those Powers is not plain; beside the manifest Qualities they have added occult ones some call fourth or fifth Qualities. Therefore a Question doth arise, *What Occult Qualities are?* and, *Whether there be any such Qualities?* Occult Qualities are those which are not so obvious, or readily discovered, neither from actual or potential Heat, nor from density or rarity; nor from colour, taste, &c. but very remotely, and that not by the Cause, but by the Effects; and so not a *Priori*, as we use to say; and their Effects, Vertue or Force is to be deduced from

the mode or kind of the substance, and not only from these or the other Qualities; yet not without respect had unto them: wherefore they depend either upon the crasis, mixture or proportion of first and second Qualities, or of the whole, hence they are called Specificks, acting (as *Helmont* affirms) by an endowed power. Yea some proceed so far as to say, that Opium causes sleep, Jalap purges, &c. because God would have it so, and so by avoiding occult Qualities run from the frying-pan into the fire, and by endeavouring to thrust them out of doors, they assert nothing at all.

But there is no matter for the Notion, if we agree concerning the thing it self, let it suffice that an occult Quality is not taken here in a gross manner, as a thing you cannot at all give any cause for, and so indeed 'tis truly the sanctuary of ignorance; but only in respect of former Causes, for examples sake, when I perceive that Opium burns my Mouth, excites Itchings, and is inflammible, I infer it to be hot; so I may infer it to be emplastring, and emollient by its gummyness, and to have an inciding or cutting quality by its bitterness; but I cannot tell that it has a narcotick Faculty, but by its effect; which notwithstanding, I cannot refer to Heat, Cold or Glutinosity, &c. but only to the crasis, disposition and mixture of the whole; not but that by Chymistry, there may be a possibility of assigning a certain Cause to all occult Qualities.

Occult Qualities are taken either *largely* or *strictly*, in a *large sense* for all Qualities that exceed or go beyond the Sphere of the first Qualities; and so Alexipharmacks, Purgers and Poysons are refer'd to them. In a *strict sense* for *specifick and particular Alteratives* respecting this, or the other part in  
parti-

particular, or its special Action, as Cephalicks, Hepaticks, &c. but to confess the truth of the whole matter, it were better abstain from the name of *Occult*, because it implies an unknown thing, and to make diligent search after Causes.

## CHAP. II.

### *Of the Principles of knowing the Faculties of Medicaments.*

**T**HE Principles of knowing the Faculties of simple Medicaments, in respect of the mixt Body, the temperament, &c. are 1. *universal*, and those either *a Priori* as they are to be found out, and this is *reason*: or *a Posteriori* as they are found, and the effect known already, and this is *experience*. But concerning these you are to note, 1. That Reason doth not always go before Experience, but most commonly follows it. For in all Physick as much as Experience has set forth, so much Reason has established concerning the certitude thereof, and its way of operation. 2. That if the Experience be certainly known, the Reason may be easily found out; but tis not so when Reason judgeth things profitable, for they often fail to answer it by Experience; *Experience* is either *certain*, already found to be constant, undoubted and thoroughly proved, as for example, that Jalap purges: or *uncertain*, doubtful, and at best, but barely probable; as for example, some other vertue of Jalap which is as yet to be found



found out; and 'tis this experience, or rather experiment that *Hippocrates* calls difficult and perillous; notwithstanding one Experience doth more than a hundred Reasons can do to the contrary; therefore Reason and Experience are to be regulated one by the other. 3. All things are not to be denied to which Experience hath given credit, or that are written concerning Medicaments; nor all things to be affirmed, but you must institute a good choice.

II. *Particular Principles* are either *extrinsecal* or *intrinsecal*, and both of them either near or remote.

The *extrinsecal* which suggest the knowledge of the Faculties of Medicaments are *Colour*, *Signature*, *Smell* and the *mode or texture of the Substance*, which is to be considered together with all the rest.

The *Colour* gives us but a very weak and infirm knowledge of the Temper and Vertues of things, and that only particular and probable, not universal. For however Colour may be rightly deduced from Sulphur explicated from Salt and Mercury; notwithstanding all high coloured things are not hot; because there is one colour that is only superficial and vanishing, as in Violet-Flowers, another immersed in watry Particles, which if they predominate do afford another temperament to the mixt Body.

Colours as such, especially if they be considered joyntly with the Mode or Texture of the Substance, do in part signifie the Temperament; but seeing 'tis with other things that they do signifie any thing to purpose ( altho the sense is affected with them first ) yet they come short of the nature of Principles, and do only remotely and faintly promote  
this



this knowledg. Thus a yellow colour chiefly signifies Heat, as for example, in Saffron, Turmeric, Gambogia, Rhubarb, Celendine the greater, and many other things, but in other things it doth not hold, as red Sanders, Roses, Violets, Winter-Cherries, &c. are not so hot.

As to *Signatures* there occurs a Question, Whether they testifie any thing concerning the Vertues of Simples? some much admiring them, and others loathing the very Notion of *Signatures*.

*Rossicinus* says that the great Parent of Nature has stamped *Signatures* upon things, that they may be Tokens and evident Signs of the hidden and occult Vertues. And 'tis very notable what *Polemon* says upon this Point, *Nature* gives a silent answer of each Particular, while it speaks with Signs whereby it manifests the vertue of every thing.

Upon these accounts *Crollius* writ a Book of *Signatures* annexed to his *Basilica Chymica*; and so has *Solemander* writ of these things, and *Claudius Deodatus* Panthei hygiast. l. i. c. ii. doth well deserve to be read upon the same account.

Those things are said to act from their *Signatures* which have some Analogy, either with some Member, that is affected by reason of Figure, as the Pyany head before the Flowers display themselves, a Nutmeg, &c. have the figure of a Man's head: Asarabacca of the Kidneys, Anacardium of the Heart, Horse-tongue, or Uvularia of the Uvula; Whitlow-grass of the Nails, the stone *Aetius* of the Child in the Womb: in humid Parts, the Blood-Stone, the Jasper and Cornelian-Stone do represent the colour of the Blood; and are therefore commended in fluxes of Blood.

Or

*Or with some Disease, Morbifick cause or Symptoms,* as for example, bony seeds, the stones in Fruit, and other stony things, as crab stones commonly called Crabs-eyes, the Jew-stone, &c. do by their figure, and consistence resemble the Stone in the Bladder or Kidneys. *Pricky and thorny things* resemble pain; therefore Carduus benedictus, Lady-Thistle, Bores-teeth, a Pikes jaw-bone are commended in the Pleurisie. So the Tuberosus, as the root of Figwort, of the lesser Celandine, of Orpine, resemble the Hemorrhoids, by which also they are exactly cured: so also yellow things do cure the yellow Jaundice.

*Or with the extrinsick hurt.* As the root of Woolfs-bane and of Vipers Bugloss resemble a Scorpion, which also cure the biting of the Scorpion. So the Plant called Arrow-head because of its remblance is commended for the drawing out of Darts and Arrows; so the Toad-stone resembles a Toad, &c.

However some dispute vehemently against these things, and utterly reject them; it would be more advised to think more modestly of these Signatures. For tho 1. all things that resemble the head are not Cephalick, nor doth it happen blindly and infallibly in all things. Tho 2. many things not so much because of the Signature, as by accident, or some other Qualities were found out to be good and beneficial; notwithstanding it cannot be denyed, but that many Remedies were found out this way, and Signatures have led us by the hand to the knowledg of the Internal Vertues of the Simples; therefore these Emblems and Characters are not to be neglected, but 'tis nevertheless necessary to compare the External with the Internal; it suffices that Signatures do suggest an

an occasion to inquire more diligently upon that account for the specifick Vertues of things.

It appertains to this place to hint upon the Remedies suggested (and as it were invented) by brute Beasts, as the couching of a Catarrhact is said to be found from the observation taken of a Goat, which was cured of it by a sharp Stake that pierced her Eye. So Dogs when their stomachs are offended eat Couch-Grass: so the use of Clysters was learnt from the bird *Ibis*; but he that has a mind to see more of this kind may consult *Salomon Albertus, orat. de re herbaria*; so then we see that Beasts are sometimes Mens Tutors, as doubtless Cats gave the occasion of finding out the Ophthalmick Vertue of Catmint, and Valerian roots, in which Cats do very much delight.

Smells do privatively signifie nothing certainly, seeing they may lye hid as in Antimony and Sulphur, which have no smell; but the Bodies of them being opened by Salts, or put on fire, they send out a most grievous scent. But positively much of the nature of Simples may be known by their Smells, which we shall deduce by Axioms.

1. *What things soever are odoriferous are hot as such.* For however it came to pass that *Scaliger* denyed it in writing against *Cardanus*, yet 'tis certain that Smells proceed from a Sulphureous and hot Exhalation; tho the other parts of the Simples may predominate, as in Violets, which are cold; yet their Scent is from a perfect, fine and hot Sulphur; notwithstanding it doth not follow, as we said before, that we should conclude those which have no smell to be cold.

2. *The*

2. The more intense the Scent is, the more intense is the Heat also; and by how much the more remiss the Scent is, by so much the Heat is weaker.

3. If the Scent is only superficial and fugitive, the mixt Body is temperate, or at least not very hot, as in Roses and Violets: but if it be intimately dispersed and mixed through the whole Body of the thing, then it is a sign of Heat, as in Camphire, Musk, Sallaphras, &c.

4. The Scents of things testify concerning the Volatility of their Parts; sometimes they are aerial, and sometimes sulphureous, and balsamical; and so sometimes more or less, one or the other.

5. Sweet scented Aromaticks (which are enriched with a gentle oleous Sulphur) do recreate the vital and animal Spirits. And as Helmont says, have an immediate contact with them; but stinking things are ungrateful to the Archeus; so that those are Cordial and Cephalick, and comfort the Nerves; but these being very unsavoury and offensive, and (also if the stench proceeds from putrefaction) very great Enemies to the Spirits, as Hen-bane, Dungs, &c.

6. The contrary doth generally hold good in Women, and even Roses themselves are loathed by the Hysterical, to whom stinking things are acceptable, and do much comfort them, as being endowed with a volatile Salt, or a Sulphur not easily resolvable.

7. Stinking things that have an eminence of volatile Salt do most of all resist Putrefaction.

8. Those things that have an urinous Scent, do dilate the Pores of the Brain, and excite the Spirits. So that in all sleepy Distempers they are most profitable.

9. Those

9. *Those things that have a heavy (or drossy) scent, hurt and fill the head. So vaporous things do load the head; but if they are but moderately so, or taken in a just Dose, they become innocent Soporificks, as Opium, Saffron, &c.*

10. *The purer the Sulphur is, the better digested it is, and the more agreeable to the Body, conducing to the prolongation of Life, but quite contrary if otherwise.*

11. *Hence it comes to pass, that temperate Sulphureous things assuage Pain, mitigate Acrimony, destroy Sharpness, fix Pains, help Head-aches, Irritations of the Nerves, and all Aches whatsoever, as Cinabars with their preparations.*

12. *Those things which together with the Sulphur have a biting Salt in them, do stimulate and stir the Humors, and drive them out. If the Salt and Sulphur be more volatile, then they send forth upward, if more fixed then down-ward; as 'tis in almost all Emeticks and Purgatives properly so called.*

13. *All resinous things are hot.*

14. *All oily, aromatick and balsamick things are hot; especially those that have any implicate smell in them, or involved so as not well to be perceived; for where the smell is explicite and apparent, there is no doubt of their being hot.*

15. *Mucilaginous things that have no great tast or smell, are either temperate or cold, as some Seeds, Emulsions, &c.*

16. *Those that have a biting Tast and Smell are good against the Scurvy, as Scurvy-grass, Water-creffes, &c. but especially when Aromaticks have both the tast and smell. And here we will take occasion to speak of their Vertues. Aromaticks are hot in respect of our natural Heat, they strengthen*

strengthen the tone of Parts, restore Heat, they increase the Sulphur, and volatile oily parts of the Blood, and cause it to move more briskly; they move the *Menses*, help Concoction, correct Crudities, refresh the Spirits, clear the Pores of the Nerves, free the Breast from all Phlegm and Stuffings, help to bring forth Children, allay Gripping and Colicks, and are carminative, stir up Lust, comfort the Hypochondriacal, and profit when the Humors are in too much fixation. These do vary in degrees, and have all those good effects from an oily volatile Salt mingled with terrestri-  
al tonic Parts.

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### CHAP. III.

*Of the knowing of the Faculties of Medicaments from that Taste of them.*

**T**aste is the particular intrinsic Principle of knowing the Faculties of Simples.

Therefore from Taste we may gain a firmer, better and more solid foundation of Temperaments, and consequently of the Vertues of things, and this either from Taste alone, or joynly with Smells, and sometimes the Substance is considered.

There are three Classes of Tastes, two extremes, which have a hot or cold effect, and one middle sort, which behave themselves temperately.

One extreme comprehends the bitter, the bisingly hot, and the Salt, for all those three are hot in taste, and

and univocally produce a hot effect; as Worm-wood, Pepper, Salt, &c.

The other extreme contains *the acid, the austere, the crabbed*, which if they vehemently exceed, do also offer other sub-alternate and homogeneous tastes, as the austere pontick, the crabbed styptick. Whatsoever therefore is acid, austere or crabbed are cold, as related to our natural Heat; and produce Cold, as an univocal effect; as Vinegar, Sorrel, unripe Grapes, Tormentil, &c. as you may find examples at large in *Macasius's Promptuarium materia Medica*.

*Sweet things* are of a middle nature; if they do not incline to one of the Extremes, they are of themselves temperate. But there is a distinction to be observed: some are moderately sweet, whose sweetness is tempered with much moisture; as Milk, Wine, Raisins, the flesh of living Creatures, &c. and these are temperately hot; yet are reputed absolutely temperate, because they preserve the Body in the same state and condition and have an agreement with the nature of the Flesh and Blood, they are sweet and kindly, whence a Rule doth arise, that is to be understood of these last things: *That the Body is nourished with sweet things*, that is, pleasant, smooth, delightful things, so that the best chyle is the sweet one. But those things that are eminently sweet with much dryness, as Honey, Sugars, *Jaccharum Saturni*, i. e. Sugar of lead, are more hot and powerful.

### *Hot Biting things,*

Are all hot, and comprehend under them all things that draw moisture into the Mouth, all things that burn, or eat up the flesh, all things that blister,



blister, all drawing things, for they destroy the viscosity of the Blood, and hinder all tartareous Concretions, they are diuretick, and some diaphoretick, some rarifie the Blood, they increase and exasperate Choller, and antiscorbuticks are of this kind.

### *Bitter things.*

They have good store of salt and earth, and do heat, and here you may note a Rule: *That some things do of themselves heat, yet cool by accident, as Camphire, Spirit of Wine and Opium: and some things which of themselves cool, do heat by accident, as Cold-water, Vinegar, &c.*

Furthermore bitter things are cutting, strengtheners, Worm-killers, increase the Appetite, as they restore Heat and Ferment; they comfort the Liver, resist Putrefaction, cure pestilential and intermitting Feavers, especially the most Balsamick sort; they open, cleanse and help those that are hypochondriacal.

### *Salt things.*

Salt things, as *Macrobius* testifies, do as it were clear and open the Passages, they are cutting and attenuating, they open and take away Obstructions, they are Diuretick and Diaphoretick, hinder Putrefaction, they rarifie the Blood, penetrate, excite Venery, and cure Gangrenes.

### *Acid, or Sharp things.*

They both coagulate Blood that is too thin, and restore that which is grumous; as we have mentioned.



oned elsewhere. They are acceptable to the Stomach, quench Thirst, obtund Choller, but not so good for the Womb, nervous Parts, and melancholly Men, because they have Particles that are contrary to membranous Parts, and fix the Humors, they penetrate very much, and are therefore of great use in several things. It is to be noted, that if either Acids or Lixivials be infused by the Veins into the Blood, that they kill a Man; those by coagulating it, these by dissolving it too much.

*Austere, rough, and crabbed things,*

Do bind, and are styptick, strengthen the Stomach, stop all Fluxes, both of the Blood and other Humors, conditioned they be not corrosive.

*Earthly things,*

Do precipitate, absorb or consume, cure the Heart-burning, resolve, temper and curb Acids, depress the Sulphur, take away preter-natural Motions; but with too much use they lessen the Appetite.

*Sweet things,*

Do mitigate, cause Expectoration, assuage Pain, mollifie, are profitable for a Cough and the Stone; yet they easily turn to Choller, and conduce to the production of Lice.

## CHAP. IV.

*Of the hot Temper of Simples.*

FROM what has been said, now we are to let you know, what things are temperate, hot or cold; that we may make the better Judgment of the Temper of those things that we have mentioned.

*Temperate things* are, if we proceed *a priori*, such as have none of the Active and Passive Qualities exceedingly in them, nor are so furnished with the active Principles, Salt, Sulphur and Mercury, as that any one doth eminently predominate, but are commensurate to one another, that the excess cannot be well observed.

If we consider Temperate things *a posteriori*, or from their effect, they are such as neither increase or diminish our natural Heat, but gently assuage Pains, gratifie and preserve that Heat, while they continue moderate, and most of these are Alimentary, but 'tis not safe to exceed in the use of them.

These have a great Latitude, for they are all properly called Temperate, which are reputed hot, cold moist or dry in the first degree, the sign that they are such, is this, that they do not exceed in Smell, Taste or Effect, therefore as to what refers to temperate things you may note, 1. That many of them are Alimentary. 2. That they are convenient to lenise or assuage. 3. That they are Digestives and

and Paregoricks i. e. allayers of Pain. 4. That they are good to mitigate and smooch all roughness in the Mouth, or any other Part. 5. That they are very good in Consumptions, Hecticks and hot Diseases. 6. That they strengthen. 7. They please, gratifie and lenifie the Pores; so that they are temperate both Internally and Externally.

And that all this may be observed more accurately, Authors do take notice, 1. Of Degrees, for seeing some Qualities both in respect of the mixt Body, and of one another, have more of the active Principles, Salt, Sulphur and Mercury ( for from these Principles we shall deduce the Faculties of mixt Bodies, as the *Galenists*, and *Aristotelians* do from the Elements ) and that some do alter the Body more either in active or passive Qualities; for some heat more, some moisten more, &c. hence it will be easily granted; that there must be some degrees or some differences, terms or proportions of Acting; which Proportions are not Arithmetical, but Geometrical. So that there are two most undoubted Axioms. 1. That mixt things alter the Body. 2. That they alter the Body more or less; either evidently, weakly or most manifestly; therefore four degrees have been constituted, lest there should be a progress in *infinitum*; for no such thing can be admitted in this case. Besides the first, second, third and fourth Degrees, there are also introduced,

2. *Mansions* of those Degrees or Subdivisions, or as it were Degrees of Degrees; for examples sake, a Parsnip is hot in the first Degree, and second Mansion; which altho some laugh at them, yet they truly are convenient and necessary in Active Qualities. For if it be true, as indeed it is most

true, that the Latitude of these things is very great, and that all cannot be contained within narrow limits; why may we not examine these things more closely, that we may better express their latitude, and how far they reach; let us not confound Peoples minds, nor can we indeed by this means any more than Astrology doth by its Degrees and Minutes.

*The Mansions* are stated to be three according as Qualities act remissly, or intensely, or in a middle way; others use the Terms of *beginning, middle and end*, as for example, a hot thing in the third Degree, heating in the beginning, &c. see *Macasius* p. 6. and *Schonbornius Man. Med. pract.* towards the end of it.

Therefore let us further see what things are in the first, second, third or fourth Degree, either hot, cold, moist or dry.

These are hot things *a priori*, as we said before, which have the active Principles, Salt, Sulphur and Mercury, and especially Sulphur with volatile Salt in some predominant measure, more or less; which chiefly appear by the Smell or Taste, and the passive under the dominion of those active ones. And they are to be called *hot in the first Degree* in which the aforesaid Salt, Sulphur and Mercury, do but lightly and sparingly exceed, or if they are in the Mixt only superficially, not intimately and thoroughly dispersed in it; or that they are not in their own power, but are obtunded by earthy and watery Parts. For the active Principles, Salt, Sulphur and Mercury bestow this Temper upon mixt Bodies; but the passive Earth and Water do only modifie.

But *a posteriori*, or from the effect they are said to be hot in the first degree, which do alter our  
natural

natural Heat, but without any notable Energy, by degrees, obscurely and scarce sensibly.

If things are hot in the first degree most of them are accounted of as temperate, as Herbs, Roots, Flowers, Woods, and other mixt Bodies that have little smell or tast, whether they be *emollients*, as having moderate moisture, as Mucilaginous things, &c. Or digestives, as the rest are.

They have their use in many Distempers, they gently open, they strengthen, discuss, mollifie and moderate or temper the Body.

As to *tast*, *insipid gross things* are hot in the first degree, but they must be such, as have light touches of Volatility, among which some number Mercurial Plants, Porcelane, Mercury, Pellitory of the Wall. *Sweet things*, as Liquorice, &c. *terreous, or earthy things*, which have a volatility in recess, or in an implicate manner; as Fumitory, and the noble Liverwort: Odoriferous which have not a Tast answerable to their Smell; as Lime-Tree Flowers, Primerose, &c.

Those are hot in the second Degree *à priori*, or from their mixture or composition, which have Sulphur and Salt, volatile, or fixed in somewhat a more eminent Degree than the former, hence the following things are hot in the second degree. 1. *Bitter things*, as Wormwood, Aloes, Birthworth, Carduus benedictus, &c. 2. *Resinous things*, the Balsamick, and the Spirituous, the tops of Pine, Marygold, Amber, Myrrh, Turpentine, Spirit of Wine, Balsom, Gum-Ammoniacum, &c. 3. *Those that are somewhat biting upon the Tongue*, as Rocket seed, Jalap, and other Purgers which are not very violent. 4. Salt things, or middle sort of Salts, as Tartar vitriolated. 5. The middle sort of Aromatics, as Bawm, Cinnamon, &c.

They are hot in the second degree *a posteriori*, or from their effects, which do more apparently and notably alter, and are furnished with either Smell, or Taste, or both, but without molestation or hurt, so that they may be born, tho they manifestly alter the Body.

So that these have as it were a middle place, they do strengthen, open, move the Menfes, cleanse, alter and work with something a greater force. And they are balsamicks which preserve the vigor of the Blood, and conduce to long life.

They are hot in the third degree, *a priori* in which the volatile or fixed Salt do predominate either with or without Sulphur, of which kind are, 1. *All volatile Salts*, as Scurvy grass, Water-crelles, Asarabacca, &c. 2. *Lixivials* as the fixed Salt of Plants. 3. *Acid*, that are also of a biting or acrimonious Quality. 4. *The acrimonious and biting*, as Pepper, &c. 5. *Aromaticks* of a stronger sort, as Cloves, Mace, &c.

They are hot *a posteriori* (or from the effect) in this degree, which alter manifestly, sensibly, and as it were with some hurt if you exceed in the use of them, so that the Tongue cannot any longer endure them without trouble, nor is the Body capable of bearing any great quantity of them. They too much rarefie the Blood, increase its Sulphur, and volatile Salt, subdue fixed Humors, cure a Cachexie, discuss Wind, open the Pores of the Nerves, therefore they are good in Palsies, they are good against the Scurvy, strongly resolve the Stone, refresh weak Spirits, and stir up the Apoplectick and Hysterical.

They are hot in the fourth degree *a priori*, or from the constitutive Principles, which have a yet

yet more acrimonious Salt, whether that Salt be *volatile*, as in Onions, *Dittander*, &c. or *fixed*, as sublimated Mercury; and these overcome the Sulphur tho it be present; therefore such are,  
 1. The most acrimonious. 2. Rubefying Medicines.  
 3. Eroding and corroding things, hence we have potential Vesicatories and Causticks, &c.

They are hot in the fourth degree, *a posteriori*, which are of the greatest activity, most vehement operation, and that suddenly, not without much hurt. But these have their certain *Mansions*, for Arsenick acts more nimble, and powerful than Onions, &c.

Let us stop a little in this place, and inquire what use this Doctrine is of, (seeing the bare names of Simples, which are hot, which are cold, &c. are mentioned: for this may seem superfluous, and a torment to Mens wit) but it is of excellent use. Seeing all alterative Medicines have relation to the Body which is to be altered, there is no small necessity that those things which act one upon the other should be so considered, as that we may know, in what proportion they act or suffer, for 'tis not sufficient that we cause alteration, but that we also attend to the due degree of alteration.

Hence it is to be noted, 1. That we must have a knowledge of Simples, and that one should not only learn the Names and Terms, but find out their natures more fully, and know them intimately, 2. The use, that one learn to alter with these Simples, as the proper means to heal the Body, 3. The way of mingling them, for as every where like de-light in like, so 'tis also in the mixing of Medicaments; of which we shall speak by it self.

## CHAP. V.

*Of the cold Temper.*

**N**OW follow *cold things*, and after these the passive.

*Cold things, à priori*, or considered in themselves, are such, if you define them *negatively*, in which Volatile, hot, biting or acrimonious, aromattick, aerial Parts are not to be found, but the active Principles, especially Sulphur and Mercury are very sparingly in them, and subjugated: the Salt also is either wanting, or having acquired a Fluor, and filled with inverted acid Particles has a different effect. *Positively*, and then they are such in which the passive Principles, Water and Earth are chiefly found, or acid Salts in the manner above declared.

Cold things are opposite to hot, yea even in their Actions: as for example, Acids fix bitter things, acrimonious or biting things, and obtund the oily things, &c.

They are *à posteriori*, or from their effects *cold*, which as related to our natural Heat do not restore it, but allay it if it be unruly and check Choller.

For as hot things do rarifie the Blood with their active acute Particles, exalt the Sulphur, and whet the volatile Salt; so cold things do concentrate the Blood and Spirits, depress the Sulphur, fix and coagulate the volatile Salt.

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The cold things which are univocally such are chiefly here intended; for example, they either dilute and assuage, as 1. *The watry things*, as Julebs, Whey, Barley water, the juice of Birch, Quince, and others that have a light sharpness; and most are such in the first degree, and some moistening also, do cool exceedingly well. So all mucilaginous, and purely gummy things are cold, as the Whites of Eggs, Gum-tragacanth, Hearts-horn, Mans Scull, Gellies, Marsh-mallow roots, Gum-arabick, the four greater, and the four lesser cold Seeds, which indeed have some oyliness in them, but 'tis tempered with much watryness. Or 2. they are such as subdue and tame the volatile Salts, as *Acids*, Juice of Citrons, Sorrel, Berberries, &c. Or, 3. *Nitrous*, as Pellitory of the Wall, the herb Mercury, Spinach, Orach, Violet Leaves. Or they respect the ebullition or motion of the Blood, as 4. *Terreous things* which precipitate as among Plants, the Flowers of Pomegranate; the earthy parts of Animals and Minerals; among Woods, Sanders, the Oak, &c. but chiefly those things that are properly terreous or earthy, as Bole-Armeniack, lac Lunæ, Terra Lemnia, Terra sigillata; Stones, as the Hyacinth, Crystal, Sapphire, Emerald; and those that are of an alkaline nature. Or, they constipate and bind, as 5. the *Austere*, the *Styprick*, and the *crabbed*, which are examples of the third degree, as Tormentil, Snake-weed, Pomegranate rinds, Acacia, Hypocystis. Or they evidently destroy, as, 6, the *poysonous* which have much excrementitious, aqueous and terreous Parts, and an impure fetid Sulphur; therefore they induce a contrary Disposition and Systasis to the Blood, as Hemlock, Henbane, Thorn-Apple; and thus they become poysonous. As hot things in the fourth degree

degree destroy by erosion, so cold things in the same degree by suffocating and coagulating.

They are equivocally and energetically cold *which cause a diffation and exhalation* of the fuliginous sulphureous Parts, as having in them a very volatile Sulphur, and so hot in themselves, as Spirit of Wine, Camphire, &c. *or take away the Cause*, as well fermentation and ebullition, as obstructions, as opening things do.

Hence it plainly appears, that it is not only cold things, which obviate the Symptomes, but also those things that respect the Cause, and take away the Tumult, are convenient in hot Diseases.

Those that are sulphureous do all heat, unless they serve for diffation or exhalation, in which respect they by accident refrigerate; lixivial saline things rarifie the Blood, and so heat it: but Acids do concentrate and cool; things of a middle nature, as Tartar vitriolated, have their effect of a middle kind, but they rather heat, cut Phlegm, &c. especially common Salt; so that all cold things may be refer'd, as it were to three general heads, that they consist of watery, earthy and saline Parts, not lixivial.

Here may be determined the Question, *Whether Acids be cold or hot?* some say they are hot because of their Attrimony, biting quality, erosion and corrosion: on the other side some affirm them to be cold, because they quench Thirst, cool the Body, and obtund Choller.

But here you must note a distinction. 1. Between the sulphureous hot things; and the saline hot things. 2. Between the internal and external use; or the application of them to solid Parts, or to the humid and spirituous.

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All sulphureous hot things that have the Sulphur with volatile Salt predominant in them, do increase our heat ; but those that want Sulphur and have the Salt altered into a fluor , as Acids, have indeed piercing acrimonious Particles rigid and biting, yet it were absurd for any to use them to restore or enliven the natural Heat, or the Sulphur, or volatile Salt of the Blood. Therefore tho by the external use it doth corrode the solid Parts and cause pain by its Acrimony, and produce redness in them, which also may be observed in a tender Stomach, by the use of an extraordinary Dose of Spirit of Vitriol ; for there will be perceived a heat and burning : yet relation had to the Blood, and to our natural Heat, Acids are deservedly accounted cold, and are truly such.

Some say that Acids do cool by accident, as being joyned with cooling Vehicles they help them to penetrate farther, and so to cool the more ; some think otherwise, that it happens by the perspiration of the igneous Calidity, &c. *The Chymists* say that it is because they precipitate, and they rightly assert in my Opinion.

The reason why *mirous* things do cool, is much the same ; they cause a manifest coolness upon the Tongue, because of their quadrangular or sexangular Figure. Therefore it is better to call them cold in effect, but 'twere best of all to know their natures rightly.

*Cold things in the first degree*, are those which do alter and cool us, but not so manifestly and evidently, but have as it were some need of a proof or demonstration that they do cool us. *In the second degree*, which do cool evidently and manifestly. *In the third degree*, which cool vehemently not without some hurt. *In the fourth degree*, which most

most of all cool, and with apparent hurt.

The uses also of cold alteratives are various, and the hurts too according as they are exhibited and applied. For they afford Repellents, Defensives, Intercipients, Incrassatives, (chiefly those that are actually cold) they stupifie also, close the Pores, quench Thirst, especially the Acid things. They are good also in hemorrhages (concerning which the 23 Aphorisme of the 5<sup>th</sup> Book deserves to be read) but this doth not hold altogether so true in Diseases of the Breast; for things actually cold, and Acids are bad for the Breast.

It is to be noted, That there are fewer cold Alteratives than hot; for 'tis better respectively to heat than to cool; nor are you absolutely to obviate the Symptom or excessive Heat, but the Cause and Disease.

Notwithstanding the cold Medicaments are more universal and common, but the hot ones more specific. For a hot Distemper doth more presuppose the disaffection or disturbance of the whole, as it is known from hence, that a Fever is an universal Disease; but a cold Distemper doth most appertain to this or the other Part, and that by some particular Fault; so that the hot Medicaments do more respect the innate Heat of every Part. So Citrons, the four Cordial Flowers, Lettuce, Water-Lilly, Coral, Pearl, Earths, Whey, Nitrous and Acid things are reckoned among the cold Cephalicks, Hepaticks, Cordials, Stomachicks, &c. which is not so wide, and general in hot things.

A doubt arises here concerning some bitter things which are reckoned among the cold things, as Lettuce, Succory, Endive, Sow-Thistle, Poppy

py, Willow, &c. which they give for Examples that deny *Galen's* assertion, that all bitter things are hot; as in particular *Averrhoes*, *Variola*, *Gryllus* and others do, which are cited in our *Opilog. l. 1. S. 1. cap. 6. pag. 29.* but the answer is the same, as we gave before concerning Smells, viz. that all bitter things, as such, are hot; but are said to be Cold, partly because the bitterness is but small, and immersed in humid Particles; partly because the effect of them is Equivocal; as for examples sake, *Succhory* is reckoned among the cold things that are good for the Liver; yet this it doth more because it opens Obstructions, and cleanseth away the Choller, &c. which we have discoursed of more at large in the place above cited.

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CHAP.

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## CHAP. VI.

*Of the moist and dry Tempers.*

AS for the passive Qualities *moist* and *dry*, it is to be noted, that the active Qualities do deservedly carry away the denomination from them; so that those that are eminently *hot*, are for the most part *dry*, unless they be substantially humid; hence it is, that it is said of *Hofmannus* his Wine, that it qualitatively dries, and substantially moistens; and those that are eminently cold (the same exception being allowed of) are for the most part moist.

We shall here repeat our *hypothesis*, or supposition which we have elsewhere mentioned, that there are two alimentary humors, the Blood, and its ministring Humor, the serum, by which we may (unless we should speak abstractedly, and by way of Philosophising) aptly mean the natural Heat, and radical moisture; for there is no natural Heat in the whole Body, but that of the Blood, nor radical moisture, but the serum, both furnished with their Forms and Qualities: notwithstanding 'tis best to retain the Terms of hot and moist, to wit, abstractedly, as I said before; of which I have spoken elsewhere more at large.

As therefore the active Qualities heat and cold, do respect the innate Heat or the Blood, and its oily volatile Parts; so moist and dry Alteratives do dispose the serum by increasing or diminishing it

it; &c. for the *moist* do preserve, restore and increase the *setum*; and on the contrary dry things do lessen, consume and dry it up. Nor doth it make against us, that some things are actually moist, and yet do dry, because of the predominant Sulphur; and some actually dry, yet notwithstanding moisten, because of the predominant wattness, as Gellies, &c.

The same things hold here which we spoke of the degrees of Heat, yet 'tis very observable, that there are no such things as moist Bodies in an excessive degree, unless one would fain call them substantially so, for they are as well predicated of those which are potentially so, and have aqueous and mucilaginous Parts, as of those which are actually so; which themselves also differ in degrees: so common Water and destilled, Whey, Barley-water with Harts-horn, Beer and Wine do moisten, but in divers degrees. Some consider Humidity with Frigidity; hence Henbane, Poppy, Nightshade are stated to be moist in the third degree, and the juice of Lettuce is esteemed as poysonous.

*They are moist in the first degree, which have but few aqueous or mucilaginous Particles.*

*In the second degree, which have them more evidently. In the general, mucilaginous things do moisten much, and as it were substantially, because they are not so soon wasted; and the watry things do moisten less, because they are sooner carried off. Therefore in the driness of the Mouth and Tongue, and in Fissures, &c. it is the custom of Practitioners to prescribe the Mucilages of Quince seed, Fleabane seed, with Syrup of Violets, &c. so also those moisten that have fat and oily Parts; therefore Oyntments and Liniments can never be*  
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proper



proper Astringents in their own nature. So all succulent, green, pulposus and fleshy things are moist: Thus oyl of sweet Almonds, and Barley-broths are good; so in a dry and squalid habit of Body, as in the hectic, and an atrophy of Parts Liniments are very profitable, and so are Mucilages, as Cumphry roots. So the eyes delight much in mucilaginous things, as Whites of Eggs, &c. so they are good to smooth, and moisten in hoarsenesses, and are good in affections of the Lungs, &c.

This is also to be observed, that those which are dry in the fourth degree, are also hot in the fourth degree, so that cold doth modify Humidity, and heat dryness, at least in most things.

As cold things are adapted to unnatural Heat, so dry things as proper for unnatural Moistures of all kind, as in Ulcers, &c.

They are dry things, that have none of the aforementioned Parts; but have the earthy Parts predominant in them; either with sulphureous Parts, Acids or some other kind; or alone, and by themselves; so all of them do mightily take up and dry moistures, hence it comes to pass, Chalk, Ceruss, Lac Lime, Pompholyx are so excellent in drying ichorous Humidities. So Ulcers hard to be heal'd which are made worse by Plaisters, are easily cured by dry Powders, as we have often seen; sometimes with hot things, as the Powder of the Leaves of Birthwort; and sometimes with terreneous things. To these also belong all strengthening and drying Fomentations, such as those that are made of Alum, Niter, Sulphur, &c. and so Baths also may be referred to this place.

We will conclude this discourse of the Faculties of Medicaments in General, with a few Cautions or Admonitions.

#### 1. Great

I. *Grant is the plenty of Medicaments.* Nor is it so much to be admired how far Humane industry has proceeded in these things, as the great providence of Nature in succouring Mankind with such great Varieties. In this (if in any thing) Nature and Art strive, that in the plenty of Simples and the infinite diversity of helps, this in its differences, and great sagacity in preparing and compoundind of things. Therefore it is a Physicians business to know all these things, but oh! what a vast Chaos it is! and how difficult it is to steer without a Guide or Pole-Star? But you are to understand, that there is a most copious and ample store of Medicaments at hand afforded us by nature; not that we use all equally alike; but that we may always have a Remedy at hand, and that that there should be no defect. Therefore

II. *An accurate choice of Medicines is to be made.* It is better to know few things well and intimately, than many things slightly and confusedly; better to use few familiarly, but 'tis good to know all; for this thing resembles Friends, we more esteem some one friend or other, then a hundred, that we barely know; for many offer friendship, but few deserve it; so a Medicament well chosen and experienced, is to be prefer'd before all others. He that takes all for his friends, has none; and he that knows all, knows none. It seems to be an absurd thing, but it is most true and commonly happens; hence also 'tis true, that many cure Diseases in their Chairs (or discourses) but few cure them in their Beds; as for example, you shall have a Physician that knows all Purgers, but when he comes to the sick Person, and is about to prescribe a Purge, he doubts which he shall choose; so that while he offers all Purgers to his mind, he doubts of all.

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We are wont also to compare this thing to a Wood, we look upon all the Trees; and while we view them all we choose none; but if we take notice of the most select and notable, we shall find some very proper for building, and then 'tis easie to hew them down. Therefore a good choice is much to be inculcated, and the best whether Gale-nical or Chymical to be picked out, especially those that are easily procured and proved by long use, first Simples, then Compounds.

III. *You must allow something to Experience.* Em-pery cures more without Reason, than Reason without Empery; therefore it is manifest in Medi-caments, that Experience is before Reason; for altho the Reason is often not plain, yet you must not presently deny Experience; 'tis a common saying that Scepticks may be found every where; but a confusion of the Mind doth closely follow doubting. Therefore approved Experience is to be observed before other things for the most part, or at least sometimes.

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## BOOK I. SECT. II.

## CHAP. I.

*Of the Matter and Use of Emollients.*

**N**OW we will consider the Faculties of Medicaments in a more special manner, and with a prefixed use in reference to practice that we may speak chiefly, 1. *Of the manner of Acting.* 2. *Of the Materia Medica (or medicinal Matter)* tho we shall do it in a more dispersed manner, whereas full Volumes have been writ of this last; to what purpose then shall I compile them in new Paper, when they may be abundantly found in other Authors? 3. *Of the way of their Administration*, and using them profitably.

Therefore as to their way of acting, we are to tell you *which are and are called Emollients?*

They are called *Emollients* from their end, and use, which do mollifie; and make supple, loosen, and make flaxile, that which is hard, stiff, dry or concreted; so that altho they do in an eminent manner profit where a thing is concreted, yet they have a greater latitude.

Hence it is that *Matratives*, *Suppuratives*, and *digestives* are near of kin to them; and may not unjustly be placed under this title, because they are as it were species's (or several kinds) of emolliation.

Those things therefore, that indicate emolliation are, 1. *Hard things*, but in a special manner, *hard dry things*, which grew hard from deficiency of moisture; which Authors commonly call *hard from siccity*; as Callosities, Corns, hardened ordure, dry Parts, and those that labour with an Atrophy.

But note that we understand in this place those things that are properly dry. i. *Those that are moderately such*, whether they be so with or without concretion: so a Bone or a Stone in the Bladder, are not so properly said to be mollified; altho in the beginning of gibbousness, Emollients may be used with good effect.

This siccity may happen either to the Passages, the Pores, or the *Materialem*, the humid or solid Substance, as will be manifest from what follows.

Hence Emollients do best in the aforesaid Cases, as Corns are best of all taken away by Emollients; Costiveness also, and all Pains thence arising, therefore Gripings are most of all eased by these; the birth of Children is made easie by Baths, and if difficult, because the Passages are dry, lubricating things are best. The avoiding also of the stone is much forwarded by Baths, and Oyntments; the hard and dry skin of melancholy People, and those that labour under an Atrophy, is neatly supplied with Baths, &c.

II. *Stiff things* do indicate Emollients, when the Fibres being made stiff need to be relaxed, which happens in Inflammations, Boils, Tumors, especially those that proceed from Blood, in Pains, in Ruptures,

tures, Apostemes, which Authors call *hard from repletion* or plenitude.

Hence also Emollients have use in Tumors, that proceed from an afflux of Humors, especially from Blood or *serum*; as it happens in the Glandules and Apostemes: hence they are applyed to the Tumors of the Glandules called the Tonsils, the Glandules in the Groin, behind the ears, &c. whether it be that the Tension being taken off the matter may be caused to return, and the Tumor dissipated, in which case, in the words of *Galen l. 5. de Simp. med. fac. c. 7.* they dissolve or make fluid that which was congealed, and by degrees digest it by Vapour: or that we may suppurate that which is strongly wedged in; so the Tumor of the Breasts from abundance of Milk distending them yields best of all to Emollients, as Diachylon, the Plaister of *Sperma Ceti Myrs.* &c. but if it will not yield, nor be dissolved with the same things somewhat increased in warmth, the Tumor may be brought to a suppuration; as if Line-seed Meal be made into a Plaister with Oyl, and Honey, which is indeed a common Remedy in the Tumors of the Kernels of the Groin.

So Emollients are convenient in Arthritick and Nephritick Pains, yea, and in the Gout it self; but with a distinction to whom they are or ought to be applyed, and to whom they ought not; for they do as it were sooth up the Pores, and allay a sad Sense, and have a noble use in Pains from distention, whence *Hippocrates* doth express for remitting of Pains, *mollifying Pains.*

So they are convenient in breeding of Teeth to make them come forth more easily. So in Ruptures, Fomentations and Liniments they are highly

ly useful to restore the Guts to their former station, by which means we have restored the imprison'd Guts several times, when they threatned an Iliack Passion.

So in opening of Apolltemes they are most useful, which the Heat being a little increased by Emplasticks, are rather to be called Suppuratives.

III. *Tartareous and coagulated things* do indicate Emollients, which *Fernelius, Pernumia, Heurnius*, &c. call *hard from Concretion*, or congelation, or coagulation; which are generated from phlegmatick, gross and viscid Humors; but 'tis not so with those that proceed from Atrabillious Humors, as cancrous Tumors.

Scirrhoties give us an example, whether in the Liver or Spleen, and the tophous matter in the Gout, and Tumors by conflux of Humors; as the *Melicerides* (which have an Humor of the consistence of Honey in them) *altheromata* (or those Tumors that have a pultis-like substance in them) or the *Kings-Evil*.

But you must moderate your Medicine according to your several Indications, for there are many simple and compound Medicaments of this kind, and they are in general moderately *hot and moist*, lest they be dissipated by the Pores, that dryness may be corrected, that stiffness (or tension) may be relaxed, and that things concreted may be diluted. *Hot*, that the matter may be tempered, and as it were concocted, or at least, that the native Heat may be comforted and corroborated; and that by means of Heat the moisture may penetrate the better; for as Cold doth harden, so Heat doth discuss. But these things are hot chiefly in the first and second degree.

Here



Here we shall note, as we observed before, that *suppuratives* do not differ from *Emollients* in respect of the *next efficient* which in both Cases is natural Heat; nor in respect of the *adjuvant*, because they are Medicaments as like one another, as an Egg is to an Egg: but they chiefly differ in respect of the *subject matter*, for those things that because of dryness or tartareous concretion do indicate *Emollients*, do not so much indicate *suppuratives*; because they can hardly be brought to any suppuration, unless it be in very few Cases; but those that are hard from tension or stiffness do indicate both, as Inflammations, that the pain may be lessened, and the matter brought to suppuration.

For however *Galen lib. 5, de Simpl. med. facult. cap. 8.* makes *Emollients* to differ from *Suppuratives*, because *Emollients* (as he says) are hotter and dryer. But *suppuratives* have a heat agreeable to the Body, and yet keep the humidity existing in them; notwithstanding this doth not universally conclude, (but as we said before) the business depends upon the disposition, and tractableness of the Matter.

Therefore *Suppuratives* are more *Emplastick*, because convenient when the Matter refuses digestion and distillation, that the Heat being by their means increased, it may be concocted, and brought to maturity; a state indeed not like the natural, but convenient and agreeable to it.

The same holds good of *Digestives*, for what *Suppuratives* are before the maturation and opening of the Tumor, the same are *digestives* afterward, which continue the suppuration, and in Ulcers and Wounds promote it, so that in this case we may kill two Birds with one stone, and comprehend *Digestives*

stives under Suppuratives, nor is there any need to separate them and handle them apart, which aim at the same end.

Hence in general it is certain, 1. That Emollients, Maturatives and Digestives do assist nature, correcting (by the force of contraries) excess and defect. 2. As in general, Medicaments ought to be proportioned to the natural Heat of the affected Part both internally and externally; so also it is true of Emollients and Suppuratives, which differ in degrees and their way of acting, as will more plainly appear by the consideration of them.

For Emollients are, 1. *Luke-warm*, for they delight in a kind heat, and moisture, and therefore it is better to apply them warm or tepid, that is, where the heat and moisture are moderate, but this should exceed the other; so warm Water, Baths, Clysters, Fomentations especially of Milk, &c. do mollifie.

2. *Mucilaginous*, as Marsh-mallow roots, Gum Tragacanth, Line-seed Meal, Fenugreek, the two Diachylon's both the Simple and Compound, and the Plaister of Mucilages: for these, (as we hinted before) are more eminently moist, or do with more Energy and Efficacy produce their effect, having some heat, that they may act the stronger.

3. *Emplasticks*, as Honey, Chamomil, Turpentine, Wax, &c. which holds good in all Plaisters designed to this end, as Melilot-plaister, &c. which do not promote suppuration of themselves, unless the matter be apt for it, and that way inclined.

4. *Fat and oily things*, both the more humid as Milk, Line-seed Oyl, Oyl of sweet-Almonds, Chamomil,

momil, Earth-worms and Henbane: and also the *less* humid, as Butter, all Fats of Beasts, especially while 'tis fresh, the fat of a Hen, of a Hare, &c. the Chirurgeons have this last for a great secret in opening Abscesses and Tumors when there is any sign of Suppuration. So also the *more mild sulphureous things*, as Saffron, &c.

5. To all these things may be added *salt things* which do stimulate, so that almost all emollient Plants have nitrous and abstersive Parts in them, and are by so much the better Emollients.

All these as Emollients, have their Moisture, in some more in some less apparent.

But they differ in degrees, for as there are various indications, so the things indicated must be various. That we may therefore follow *Fernelius lib. 6 meth. med. cap. 6.* where he elegantly handles this business. First we say, that those which have Humidity predominant over Heat, do mollifie gently, and as it were in the first degree, and hard things from Siccity do indicate them, and such are the emollient Herbs, Oyl, &c.

But where the Heat doth moderately exceed the Moisture they being hotter, and of more tenuious Parts do mollifie more strongly, and as it were in the second degree, and they also rarifie. For these are like the temperate heat of the Body, and these are most properly called *suppuratives*. *Galen* calls them *relaxing things* which attenuate, relax or open that tension we spoke of before, and they are hot and dry in the first degree, or in the beginning of the second, as Chamomil, Figs, Pigs grease, Lillies, &c. And these are assigned to tension, and most of them are Paregorical (or pain-Allayers) which also may be contained in this Class.

Those

Those which are yet hotter, and more tenuous, as it were in the second or third degree, and more dry than moist, those do mollifie and resolve at one and the same time. For the third Class of hard Tumors, the cold and concreate where the dryness is great, do not only require Emollients (as being more feeble) but also Resolvents, as Acids, Acrimonious things, and inciding or cutting things, as it were to help and stimulate; hence they are to be added, and used now and then with Emollients; that they may act the stronger, such are Gums, as Gum Ammoniacum, Styrax, Galbanum, Bdellium, especially if they be fresh, and these are convenient for all scirrhus Concretions.

Note that some Tumors are *hot*, and they indicate moderate Heaters and Moistners of the first or second order; some are *cold* which are more hardly matured, if it can be done at all, and they very often turn not into a good matter or corruption, but into a matter somewhat like it; and these indicate the hotter Medicines.

Hence it is manifest, that the use of Emollients is both internal and external: but the external is more usual, those that are used internally are gentle looseners, Lubricatives or Resolvents. Nor are you so much to give Emollients for inward Tumors, as Resolvents; thus the vertue of Oyl of sweet Almonds is very great in Apostemes, Pleurisies, Colicks, Nephritick pains, &c. the external use of Emollients is to mollifie, suppurate, digest, resolve and mollifie both together.

As to the way of applying them and the forms they are used in, they are chiefly *Pulvises*, *Liniments*, *Oynments*, *Plasters*, *Fomentations* with Milk, *Baths*, &c. Clysters also do appertain to these, especially when the ordure is hardned, and they are used either

ther with or without Carminatives, Digesters, Pain-allayers, but we shall speak of this in its proper place.

In the first place emollient Cataplasmes and Plaisters are most convenient, but in stubborn Cases we perform more with Plaisters than Cataplasms; because they easily cool, and often repel the matter, and these are used before other forms for maturation, and the rest are better for discussion; such a Pultis may easily be made of *Marsh-mallow roots, white Lilly roots, the five Emollient Herbs, the Flowers of Tree Mallows, Chamomil, Melilot, Linseed Meal, Fenugreek meal, Figs, &c.* in a sufficient quantity of Milk, boyling all to a meet mash or putrilage, and applying it hot two or three times a day.

It remains that we show wherein Emollients are not convenient, and give some cautions in the use of them.

1. In General, we must have a care, that in mollifying we do not harden by drying; but that we proportion all our Medicaments to their Indications.

2. Emollients and Suppuratives are due to the very Part affected, but we must not in the mean time neglect the whole; whether it requires purging, or sweat, or Alterations, &c.

3. In Particular, Emollients are not convenient for atrabilious Tumors, which have a saline Acrimony in them, like sublimated Mercury; therefore it is a golden caution, that *Galen gives, viz. That Cancers and cancrans Tumors are exasperated by Emollients,* for so the Pores would be more dilated which would draw a greater flux of Humors into the Part, and the corrosive Acrimony would enlarge the Sore, seeing it is not capable of being discussed, digested, or brought to maturation; and  
so

so mollifying would be an Increaser of Putrefaction. You may see a neat, but a sad example of this in *Wierus obs. p. 95. et seq.* and there are other sorts of Tumors, which being hid, and not opened have been by the use of fat Emollients sadly exasperated, and afterward poured out their hidden Poyson.

4. You must avoid Emollients in the fissures of the Breasts, as very hurtful; for seeing the Nipples are naturally very moist, gentle exsiccatives will do best in that case.

5. In Affections and Diseases of the Lungs you must deal very cautiously with Emollients upon the external Parts, lest you relax their tone, and make them apt to receive affluxes of Humors.

6. Where the Matter is thin, subtile and apt to be discussed, there Emollients and Emplasticks do harm by shutting the Pores, as in an Erysipelas, or *St. Anthony's fire*.

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 BOOK I. SECT. II.
 

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## CHAP. II.

*Of Astringents.*

**T**He Latitude of Astringents is wide, and the use of them very great, for under this Class are comprehended, *induratives*, *incrassatives*, *astringents*, *occludents*, *absorbing things*, *repellents* and *defendents*, the opposites of all which are rarefying things.

Yet they differ in degrees among themselves, especially the *induratives* do more respect the Pores, *incrassatives* the Humors, *astringents* are placed as it were in the middle between the other two.

And Induratives are altogether the same with Repellents, and agree with them in their Faculties, therefore it is not unadvised to comprehend them in the same Class.

Astringents are also commonly called Stypticks or Stegnoticks, hence styptick Ninctures, and styptick Powders, and Stegnoticks are in use.

As to their manner of working, Astringents have in general very thick and gross Parts, and  
by



by the predominancy of these Parts they fix flax-  
 ile, and raging Humors, and do as it were hin-  
 der them in their Motions, or, (that we may use  
 the terms of the Methodists) they bind whatsoever  
 is loose.

That which doth universally and mainly indicate  
 astringency is *laxity of parts*, next *humidity*; or in  
 particular, 1. *Laxity of the sides and coats of the*  
*Parts*. Therefore Astringents are good to corro-  
 borate all Parts, and in particular the Stomach,  
 the Liver, the Spleen, &c. for if it be asked, in  
 what consists the weakness of the Stomach, or any  
 other Member? (excepting the weakness of heat)  
 the Answer must be, that it consists in tenuity of  
 the Substance; which *Galen* calls the immoderate-  
 ness of the Passages and Pores, therefore they are  
 called *Tonick*, that strengthen the Tone of all  
 the Bowels, the Stomach, the Liver, the Brain, &c.  
 hence the *viscera* do in a special manner cover  
 strengthening and binding things; they are the  
 best corroboratives, that have an agreeableness with  
 the natural Heat, and bind and confirm the  
 Parts.

Thus Astringents are convenient to moderate  
 the consistence of the Blood, and resist Putrefa-  
 ction: therefore many Astringents are Alexiphar-  
 mack (for the very essence of malignant Disea-  
 ses, especially the Plague, seems to consist in the  
 resolution of the Blood, when its whole Frame  
 and Texture is perverted, that it doth not suffice  
 for Vital Actions;) such are acids, mucilaginous  
 precipitatives, and balsomick diaphoreticks.

So they have place in the looseness of the Gums,  
 or of the Teeth, yea, and in the tooth-ach. For  
 'tis the observation of Practitioners, that Astrin-  
 gents in Gargarisms do strengthen the Teeth, and  
 hinder

hinder the flux of Humors, and consequently prevent the Tooth-ach. So astringent Baths help the loose scorbutick Tumors of the Feet, the falling down of the Womb, the right Gut, or of the Eyes: they prevent Abortion; so they are good for Sprains, loosened Joynts, Gibbosities, &c. and also they cure the incontinence of Urine, and those that piss a-bed, for they confirm, and strengthen the Ligatures, the Muscles, and all the Parts.

2. *Rarity of the Pores*, thus Astringents are very proper when we sweat too much or sweat Blood, both the induratives and constipatives, and also the obstructing things, as the oyle. So also in the rankness of the Arm-pits and stench of the Feet, when Veins are broken, or any flux of Blood, so for the Hectical and consumptive, cold Oyls are very good for the Back; the Plaister of Frog-spawn, as *Petrus Aponensis* doth advise, and other things of the like nature, that the distillation of the Humors may be hindered. Hence *Mesue* rightly says, that an Astringent strikes in, thickens, repels, glues together things divided, and with its thick substance obtunds all Acrimonious, salt and bitter things.

3. *The moveableness of the Humors*. And thus also they are good taken inwardly against too much sweat, for they concentrate and bind together the rarefied Blood, when 'tis too moveable, and furious, in which case for Experiment the Antiphthical tincture of Vitriol of *Mars*, and *saccharum Saturni* may be commended; which I have found very effectual in that case. So in the rage and motion of Choller they constrain it to cease, as in the *cholera*, *diarrhea*, or *Dysentery*, in over much Purgation, Vomiting, and running of

the Reins, nocturnal pollutions; they defend the Parts from flux of Humors, from pain and pulsation, take away the Acrimony of irritating Humors, they precipitate sharpness, take away its force and allay it; therefore they are good in virulent Gonorrhea's, in the Whites, &c.

4. *In all solution of Unity* by erosion, ruction or gaping. So they are of great use in losing of leather (as we use to say) and Parts rubbed raw by any means, in the fissures of the Lips and Breasts; in exulcerations of the Kidneys and Bowels, not omitting abstersgents.

5. *The consequent eruption of Humors, Flood and serion.* Hence it is, that they are of use in spitting of Blood, breaking of a Vein, hemorrhages of the Nose, Wounds, Arteries and all others; they reduce immoderate fluxes of the Menfes, they take away bloody Vomiting, and pissing of blood, chiefly they suspend, incrassate all thin Catarrhs, salt and acrimonious Humors that fall into the Breast, and reduce them to a State very near the natural.

In some cases they do both stop the Flux and corroborate the Part, as in Ulcers that run with a ferous ichorous Humor, and in the Whites, &c.

But especially and above all, the divided Unity of the Parts doth indicate Astringents, contained under the ternary of Diseases *divarquet*, *diarrhet*, and *dissect*. which being Englished is *ruption*, *incision*, *erosion*: for such things as suffer either of these three, desire to be united.

Therefore the Medicaments due to these indications are of several kinds; which tho they all agree in one *third*, and intend the same end, yet as *Galen* asserts, this, or the other astringent Medicament have beside their astringency some other Qualities

Qualities, so that they cannot have the same effect; as 'tis observed, that divers effects do proceed from divers Astringents. For that which binds doth not only bind, but is also acrimonious, or fat, or sweet, or salt, or acid; by which you may plainly perceive what care there must be in the choice of proper Astringents for this and the other purpose.

In general proper Astringents are cold and dry, that is, those that have the earthy Quality predominant in them, or as *Carisius* says, those that have their vertue consisting in a certain largeness, or figure of Parts; by which as wedges they wring other parts of the Body, or as strings bind them together.

Therefore the active Principles, Salt, Sulphur and Mercury are scarcely perceptible in these, or as it were over-whelmed, and fixed by the terreous Parts, which will presently more appear in the particular counting of them up.

They are either terreous dryers and absorbers, which bind without bitingness, as Bole-Armeniac, Coral, the Blood-stone, *Terra sigillata*, Chalk, Crocus Martis, &c.

Or *crabbed and austere*, which are both Astringents, but they differ in degrees according to more or less; as Snake-weed, Tormentil, Acacia, Pomagranate rind, Omphacium, Quinces, Medlars, Services (or the fruit of the Service-tree) the Cornel-Tree, *Terra Japonica* (or the earth of Japan) Alum and Vitriol, which abound in an austere constringing Salt (either vegetable or metallick) with earthy Parts.

Or *acid*; as Sorrel, Spirit of Vitriol simple or Martial, but of Acid Astringents you are to note,

1. *That acid Astringents are more apt for fluxile Humors*, either in or out of the Vessels, for they do as it were coagulate, and fix them; but they are not so apt for the Pores and other Parts; hence they are good in the bleeding of the Nose if internally used, for we have known that scorbutick fluxes of Blood have been cured with Spirit of Vitriol; because the Acids do coagulate the fluid Blood, but they do not agree so well with the Pores, and external Parts; for by cutting and diluting, &c. they often do exasperate such bleedings.

2. *Therefore you must not always confide in acid Astringents*, for they do not so bind the Pores (as we said before) as austere, crabbed and styptick things do; but at the same time they have tenuity of Parts. Therefore avoid Acids in Dysenteries, when a Vein is broken, &c. and wheresoever the Pores of the Parts or Membranes be substantially affected.

Or *emplasticks*, as well the oily which obstruct the Pores; as gummy, mucilaginous, viscid and emplastick things, properly so called; as Meaf, Henbane seed, Gum-tragacanth, Gum-Arabick, Dragons-blood, Mastick, &c. There are also some that are sweet, as Chesnuts; bitter, as Aloes, &c.

Or also *balsamick*, and have a Sulphur lodged in the earthy Parts, either *implicitly*, some other Quality predominating, whence they are cold, and properly called Astringents, as Galls, Pomegranate rinds, &c. or *explicitly*, as Aloes (which externally binds) Myrrh, Nutmeg, Cinnamon, Cassia lignea, &c. which last are hot, and have some biting Quality; yet they are Astringents as they have an emplastick force, and because of the kind of their Substance, which is of drying earthy Parts, (which

(which is apparent by an Experiment, for if you take the *Caput mortuum* after destillation of Cinamon-water it binds very strongly) but they are hardly to be called Astringents, for either they are not used for binding internally, as Aloes, or they are good at the same time to strengthen the Heat, and so confirm the Parts, as Nutmeg stops Vomiting.

Or *Escharoticks*, which also do not properly bind, but as they consume the flowing Humor, and induce a Scar upon the Parts, and so fortifie them, that the Humors may not break forth, in that sense they leave a kind of astringtion behind them; as fire doth stop Hemorrhages in amputations of sphacelous (or mortified) Limbs, so quick Lime is also used; and hither Spirit of Vitriol, and in some respect Vinegar may be refer'd, which in some Cases have place.

Or *things that fix*, as Narcoticks and Opiates, where note,

1. That even *aqueous* things do appertain to improper Astringents; for of themselves they have not any binding Quality, (the terrene Parts remain in the bottom of the Alembick in their destillation) therefore astringent Waters, as of Plantane, Horse-tail, Knot Grass, &c. are not properly astringents, but they are referred to them as they yield to us convenient Vehicles, to convey astringents into the Body;

2. *Martial* things (or of Iron) are of a middle nature, for they open as well as bind, as we shall more at large speak of, when we come to Aperitives: only note in this place, that the more vitrioline they are, and the more explicite the metallick Salt is, the more they open; and the more earthy, the more they bind.

3. All *acini* ( or little stones ) such as are in Grapes, Raisins, &c. do bind; therefore if Raisins be prescribed to loosen, let them be stoned ( or exacinated. )

4. *Roasted things* do by that means bind more than otherwise, as Rhubarb, Services, the Cornel Tree and Nutmegs, because the watery and volatile Parts are consumed.

As to the manner of applying them, some are used *internally*, some *externally*; some *internally and externally*: for tho they are more due to inward Fluxions, yet they have a great use outwardly.

They must be agreeable to the Parts, the Humors, and the Cause: for some are more convenient than others; the aromattick Astringents are most agreeable to the Stomack, as Nutmeg, Cinnamon, Treacle, &c. which are at least to be mingled, if they be not solely to be used, for 'tis most true that astringent Aromatticks mixed with terrene Parts are best for the Stomack, and so then for Dysenteries and great loosenesses; therefore in our styptick Powder of Coral, Snake-weed, Tormenil, &c. we very profitably mix Nutmeg.

*Acids* also are convenient for the Stomack, for Vinegar both in Drink and Fomentations does it much good, unless it be where there is some erosion of the Intestines or Glandules, or that it is to be feared: and also where there is a great irritation, in which case *Acids* may be profitably used externally.

When the *Lungs* are affected *resolvents* are mingled amongst them; as we shall mention by and by. In cases of the *Liver* penetrating *Acids*: In diseases of the Head *balsamicks*: you must in all Cases



Cases add the proper corrective, that we may render all things conformable to the natural state.

So if the matter be too fluxile and acrimonious, mucilaginous things are most convenient: if venomous and malignant, as in an epidemical Dysentery Bezoardicks are to be added, and astringents that have that Faculty are to be chosen; as Snake-weed, Tormentil, Terra sigillata, Terra Lemnia, &c. which both bind, and are good against Malignity.

It is also an excellent contrivance, if there be acrimony of Humors, and an irritation of the membranous Parts, to mingle with the astringents things that fix, in which case both work together what cannot be expected by either singly; so Opiates do indeed stop Dysenteries and Loosness, and Astringents do the same, but they fix the Humors much more with Opiates, and Astringents do defend the intestine Parts more than Opiates, therefore *Laudanum opiatum* does more with a styptick Powder, because then both things are aimed at.

Where the Parts are to be defended terrene things profit most; and a Rule which may be deduced from what hath been said, is to be noted.

That we must never bind over-much; that the Pores may not be too much closed, and hard to be relaxed. Thus from the too much use of Astringents in Dysenteries a great anxiety doth arise, and untoward Ulcers, &c. for generally fluxes are rather to be moderated than stopped, and all things are to be done according as Nature directs: for which cause also even resolvent Aromaticks, yea, and opening also, are to be added.

Now we will shew to you where Astringents are not convenient; both in the external and internal use of them.

You must use them very sparingly in diseases of the *Breast*, because the tone of the Lungs requires Laxity, and because the vitigious matter may be easily repelled to the heart, because of their vicinity.

Therefore they are not convenient in a *straitness of the Voice* or of the *Breast*, in *difficulty of breathing* and *asthma's* ( which *Galen* himself doth admonish you of ) they are also bad in a *pleurisie*, or *Peripneumonia*, for they thicken the Humors, and make them compact, and unfit for expectoration; and induce suffocation; so that in all these cases they are to be shunned, but if mixt Indications do happen, as an *Asthma* with a looseness, they are to be moderated.

They are inconvenient where we must attenuate, or where a crisis is imminent; lest we should hinder Nature's motion.

They are not to be used externally in loosenesses, because they will cause a motion contrary to nature.

Nor in the *Faundise*, because they obstruct, nor in continued fevers externally, nor cold things; because they shut the Pores, and hinder Sweat and a Crisis.

Avoid them also in *softive People*; and in Women that have, or are about to have their *Menses*; but in these Cases you are to consider what is most urgent.

They are applied *actually cold*; as when we must repel, in rarefaction of the Blood, when its force and effusion is to be stopped, as to the Testicles, the Hypochondriacs, and fore-head; hence frontals,

tals, &c. are made of Astringents actually cold, for they cannot hurt the brain, because it is guarded on all sides by a bone.

But they must not be so cold in cases that concern the Breast, the Stomach, the Liver, and the Womb (tho in a present hemorrhage they may be applyed to the sides, or hypochondria's) lest we spoil their actions, for cold things are enemies to the membranous and nervous Parts. So in spitting of Blood you must avoid applying Astringents actually cold to the Breast.

Hence we may gather the place of *applying them*, which is various, for they are wont to be applyed to the forehead, the Neck, the Loins; the Stones, and other relaxed Parts.

Note that when Astringents are to be used internally, they are to be repeated. For we observe in our practise, that if in the Dysentery you give an Opiate or Astringents, that their efficacy ends in six or seven hours, but we must not give it over so.

The external form also doth vary; *internally* astringents are given in the form of Powders, Trochiscs, Tinctures, Pills, &c. where you may note, that it is far better to give them in a dry form, than a moist; for Liquids soon pass away, therefore we must not confide so much in them: for tho you give very astringent Tinctures, and of great use, yet they do not constrain the sides and membranes of the Bowels, as much as the dry forms; but what we say is meant mostly of aqueous things, Potions, Decoctions, &c. unless you have at the same time an intension to dilute; so they commonly state Emulsions of sweet Almonds to bind the Belly, and stop Fluxes; but they more properly dilute and temper the matter.

*Externally*

Externally Plaisters, Frontals, Cerecloaths, Cataplasms (or Pultisses) &c. are in use.

We are not so much to trust *liquid Astringents* externally, unless we have at the same time a desire to repel: hence *astringent Baths* in too great a flux of the Menfes or Whites, &c. are not so convenient, or so much used by accurate Practitioners, because that is contrary to the action of the natural heat: and these do rather relax in their own nature, and therefore are not so safely used.

So *astringent Clysters*, if we consider the thing exactly have the same to be said of them; or, properly speaking, there are no astringent Clysters, as well for the reason aforesaid, as because every moisture injected into the right Gut, doth as being strange to it, somewhat irritate it, yea tho it were bare water. Yet they are called astringent Clysters and prescribed, which restore the lost slime or mucilage of the Guts and allswage pain, as those of Milk, Deer's fat, &c. which *Mindereus* commends above all, but yet even this way they rather dilute and qualifie than bind.

Thus to stop the immoderate flux of the Menfes *fomentations* and *suffumigations* are prescribed, which unless they are applyed, to divert, alter or dissipate, do not so constantly help.

So there's no great faith to be had in astringent Liniments and Oyntments, for all Salts do relax: indeed the *Counthees Oyntment*, because in it the Wax, and the styptick Ingredients do temper the oylinefs thereof, may be applyed, but 'tis the only one among Oyntments, and its stringent Quality is but remis: but those Oyntments that are Aromatick, those strengthen the Stomach and other Parts, upon another account.

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We will furthermore observe two things concerning peculiar Astringents, the first is the regular time of using them; the second is the use it self.

1. *Some alimentary Astringents, taken before Meat do bind, and taken after Meat do loosen.* Which may be deduced from the constriction of the Fibres: for when they are given before meat, the *Pylorus* is more strengthened by them; but when they are given after meat, it is by accident more opened by the constriction of the sides of the Stomach; this is true in Quinces; hence we may infer, that 'tis not good to use Astringents with Meat. We have observed, that by accident in weak and lax Textures, that even styptick Powders have loosened them, 'tis to be understood where the Stomach and the Guts were weak and relaxed.

2. *There are some Cases in which, tho there be a Flux and mobility of Humors and an Eruption, yet Astringents are so far from being convenient, they rather hurt.* As in an overmuch Flux of the Menfes (especially in hypochondrical Persons) for they often happen from obstructions of the Vessels, the free motion of the blood being hindred, and Nature so grieved, that it is forced to seek for other ways: or when it happens from too much cold; and then Astringents are used in vain, there is indeed an Indication for Astringents, but this is the last thing or end. But he that would attain the end, must give good heed to the means, for in that case opening things may be more convenient: so in hydropical and cachectical Persons bleeding at the Nose is very frequent, and indeed sometimes very regular, and exactly periodical, that the right or the left Nostril should bleed, according as the Li  
ve

ver or Spleen is most affected; there also things to strengthen the Bowels are required, but the main business is to open Obstructions, therefore it must be observed as a Rule, *That where together with the efflux of Humors, there is also an obstruction of the Vessels, or abundance of Humors, Astringents are not so proper, but in the first case opening things, and in the second due evacuations, as blood-letting, &c.*

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BOOK

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## BOOK I. SECT. II.

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### CHAP. III.

#### *Of Aperitives ( or Openers. )*

**A**S for *aperitives*, resolvents, attenuatives, cutting and absorbing Things may be reduced to them, as we shall hereafter manifest.

#### *Their way of Acting,*

And Vertue, consist principally in tenuity of Parts, opening things have Particles in them, that incide, that are acute and penetrative, that open the Passages, by which means they give motion to fixed Humors, and clear the ways, that they are to pass through.

But secondarily, Aperitives must have some thickness of Substance, that their vertue may not presently expire, or be dissipated, as rarefying things do, which belong more to the Pores, because they open them, and render the Humors fluxile; those that gain a Passage and remain, are much to be esteemed: hence bitter things are of  
great



great repute among openers; and because also of their terrene Parts which do strengthen; therefore let it be a standing Rule, *That they are the best Aperitives which also at the same time corroborate the Parts, and not relax them.*

And these are properly the first Class, to wit, of *volatiles* which are most rightly called Aperitives. There are also besides these, *absorbents* and *resolvents*; which do open, not by their own force, because they penetrate, and have tenuious Particles; but because they absorb or consume that *coagulum* which fixes the Humors, and those coagulatives are commonly acid, pontick, austere; which being sweetned do move more freely, and circulate more readily.

### Indications.

Their, as it were universal and common indication, is, 1. *A thing obstructed*, hence it is, that opening things are good for all Obstructions in general, as for examples sake,

1. *Of the viscera or intrails*, as the Liver, the Womb, the stop of the Menses, of the Kidneys, Mesentery, &c. where you may note; *That those Intrails are most subject to Obstructions, that have most Vessels in them*, as the Liver, and the Spleen especially.

2. *Of the Vessels*, as of the Veins and Arteries, which being of the nature of pipes, they (as water-Pipes use to do) gather some slimy matter to the sides of them, which by degrees stops up the Vessels; hence in those, that are obstructed, we find the Pulse raised, and the blood to move more swiftly, because it has a narrower space: so it happens, that Nerves are obstructed, as in the *Palsy* where

where nervine Aperitives are proper, which clear their Pores; these Obstructions happen also to the salival Vessels, and to the lymphatick, &c.

3. Of the *Passages*, as the passage of the Choller, the Ureters, &c. therefore they are useful in the Jaundise, Colick, Stone, &c. where by the by you may note, *That all nephritical Persons are hypochondriacal*, or have their blood abounding with tartareous and obstructing matter.

II. *Concrete and tartareous matter* doth indicate opening things, when salt, tartareous and earthy Obstructions are caused by them; where *resolvents* are proper; as in the Stone, Scurvy, and hypochondriacal Cases, whether the concretion is in being or like to be; hence it is that they are profitable where the blood is *grumous*, in palpitation of the Heart, in faintings, syncope's, polypus of the heart, &c. so also in Bruises, and after Falls, and in Wounds; in internal *abscesses*, pleurifies, &c. so that most antipleuriticks, and vulneraries are resolvents; and the same things are convenient in the Pleurisie, as after Falls and Bruises. So also (as we said before) Resolvents joyned with Astringents are convenient, where a Vein is broken: so in an Asthma and Cough: in all scirrhoufness of the Liver and Spleen, as well inwardly as outwardly; as Gum-Ammoniack, and other things, so in the Stone resolvents are profitable; as *sperma celi*, the volatile salt of Amber, Crabs eyes, &c. are very good.

Those things that are liable to these concretions, are the Blood, the Choller, the Serum, the Urine, the Milk; whensoever they are extravasated or restagnate; yea Resolvents are good for the wind, and thus *carminatives* come in; for what do they do, but resolve the gross Vapors, and make the

the ways open? so they are good when the Orifices and Pores do close.

III. *Thick, viscid, clammy and gross Humors* do indicate opening things, whether it be the *Choller*, when it grows thick and dull, and loses its own nature, and its saline-sulphureous kind, and balsamick quality; or of cold, *phlegmatick*, and such like Humors; therefore they are very good in the Dropsie called the *Anasarca*, in *Catarrhs* from gross Humors, in a *Cachexy*, in the clammy Stone, *phlegmatick Stomachs*, &c. but chiefly the cutting and attenuating things.

For however thin Humors seem to be in fault, as in the *Scurvy* and the *hypochondriacal*, yet 'tis a thick Humor that lies at bottom, and besides the salt Particles, there are others; hence proceed the variety of Symptomes. So the *Serum*, and the *Lympha*, as long as they are kept in their own Sphere, and under the dominion of the natural heat, are thin; but when they fall off, or slip out of the Vessels, or out of the Body, they thicken; as we see in *Catarrhs*.

So also volatile *Aperitives* are good in *Apoplexies*, when the roots of the Nerves are obstructed; so in obstructions of the *Nostrils*, in intermitting Feavers, and difficulty of breathing, &c. and in this *Purgers* (which do all resolve and thin the Humors) are very proper.

IV. *The austere, the acid, the pontick and the crabbed Humors*, do indicate *Aperitives*, as when the Blood is fixed by an Acid, when the Juices of the Body are constrained by the austere, that there cannot be a due circulation of the Blood, nor the volatile Parts have their freedom to act. And in this case *absorbents* (or such as destroy the acidity) *saturatives* (or those that imbibe it) and pre-

*precipitatives* are of most use. From which appears their great use, as for example, in *veriginous cases*, *Epilepsies*, *Apoplexies* and *Palsies*; the absorbing and opening *Cephalicks*, especially *Cinnabars* which render the Blood fluid, are of great use upon that account, as in *diseases of the Joints*, in most *Pains*, in the *Stone*, *Ischiatica*, *diseases of the Womb*. So volatile Salts either alone, or joined to an oyliness. So *Aperitives* do almost the whole business, in the *yellow and black Jaundise*, in *Scirrhoties*, *Dropsies* and *Cachexies*, but mostly in the *Scurvy* and *hypochondriacal Cases*. But if it be asked, how *Steel* and its preparations do all and open? the best answer will be, that they do it by *absorbing* (that may we omit much that may be said in this Case) as *Spirit of Vitriol*, *Salt*, *Niter*, and *aqua fortis* are sweetened if poured upon *Iron* or *Steel*, and have their points broken, their sharpness saturated, and turn to *Vitriol*. The reason is the same in the *Body*, which makes *Glauber* praise *Coral*, as a mighty thing in *hypochondriacal Cases*; so also they are good in *nephritick Cases*.

And these *Aperitives* are such either by *altering* or *purging*, that by the first way they may correct the peccant Matter, and re-establish the Passages, and the Vessels; that the second way they may carry off; yea, *Purgers* are great *Aperitives*, because all of them have a tenuity of Parts; therefore 'tis a Rule in Practice, that in *Obstructions of the Viscera* (or *Intrails*) we must not insist upon opening things alone, but must add *Purgers*, that that which is freed and opened may be evacuated. And in *Chronical Distempers* we are to use both, first *Aperitives*, then *Purgers*, and so to be continued in like manner.

We need not here enter upon the matter of Purgers, because they are so well known: but this at least appertains to this place which *Martianus* mentions ( and *Gesnerus* has examples of the same kind ) that Purgers do advance, and increase the force of Aperitives.

The Aperitives which satisfy all the former Intentions are of several kinds, as *Montanus* and Experience do testify. 1. There are many of them which do not exceed the second degree of Heat, or the first Mansion of the third degree. 2. They are to have a thick Substance strengthening and terrene, lest the Heat be dissipated. The active Principles especially Salt and Mercury or aerial Parts are to predominate, yet mixed with earthy Parts; And they are,

1. *Things of a biting Tast and Quality*, either with an Aromatical Energy, or with the Virtue of volatile Salt; as the five opening Roots, particularly those of Fennel and Parsley, Burnet, Wake-Robin, the antiscorbutical Plants, Scurvy-grass, Cresses, Mustard, Cortex Winteranus, &c.

2. *Aromatics*, and oily volatiles, as Mint, Penny-Royal, the Flowers of Lilly of the Vallies, Balm, Cinnamon, Cubebs, Daucus seed, Mace, &c. the carminative oyls of Aniseed, Fennel-seed; volatile Salts, as antiscorbutick Spirits.

3. *Bitter things* ( which we say do it best ) as Succory-root, Gentian-root, Sea-Onion root, Wormwood, Agrimony, Germander, Horehound, Centaury, the Chast Tree, Gum-Ammoniack, Aloes, and many preparations made of these things, as *Pil. de Ammoniaco*, the Tincture of Wormwood, Infusions, &c.

4. *Acids*, as pickled Capers, the volatile Spirit or Salt, Vitriol, Niter, Tartar, Clyffus of Antimony

Antimony, which penetrate very much : Sorrel, Wood-Sorrel, the Juice of Citrons, the Cream and Cryasls of Tartar.

5. *Aqueous things* which dilute, temper, cleanse and afford a vehicle to the rest ; as Whey, destilled Waters, &c.

6. *Fixt absorbents, lixivious things, and of a middle sort*, as the Salt of Plants, Tincture of Tartar, Tincture of Antimony tartarised, which do mightily cleanse ; so also *terreous things*, as well the *alkaline*, as Ceterach, the noble Liverwort, Crabs-eyes, Coral, Tartar vitriolated, &c. as the vitriolated Salts, as Vitriol, the Vitriol of Mars ( or Iron ) the aperitive Crocus of Mars ( or Iron ) the Filings of Steel, the Tinctures of it, and compound things made of these : especially the most choice Aperitives are of four sorts, viz. preparations of Steel, Tartar, Vitriols and Antimony.

So all *diureticks* are Aperitives which are especially convenient when the gibbous part of the Liver is affected, and the Disease intimately joyned to the Blood.

### *The use, and way of applying them.*

Aperitives and Resolvents are to be used when the Indication requires them, but with some cautions.

1. They are more convenient, and useful after *universal Evacuations*, or at least not omitting them ; otherwise the Humors may be wedged in so that they cannot be extricated out of the Vessels and Passages. Hence Purgers are very good and proper, as we said before, and other universal helps, as letting of Blood, which is very convenient in great Obstructions, especially if the Blood

be faulty either in quantity or quality ; as in a stop of the Menses, palpitation of the Heart, and sometimes even in the hypochondriacal, Aperitives and Purgers will not do the business without blood-letting ; which is chiefly to be used in the *suppression of the Menses*.

2. You must not insist always and solely upon *Aperitives, especially the volatile*. 'Tis true, that they pierce to the most remote Parts, that they do cleanse and rarifie the Humors, and are very great and generous Medicaments : so inciding and attenuating things do behave themselves stoutly ; but if one insist upon the continual use of them, and do not interpose corroboratives, he spoils the Tone of the Intrails, and brings the Body to an ill habit. Hence we have seen hypochondriacal People long upon the use of such things to no purpose, if they neglected tonick or corroborative things. And they err far more, who think by the use of volatile Spirits (as of salt Armoniack) to overcome Obstructions.

3. You must also mingle things, that have a respect to the affected Part ; as Cephalicks to the Head, Hepaticks to the Liver, &c. that the native Heat of those Parts may be preserved. So the Stone is bred from an obstruction of the Kidneys, but you must mix with the Openers those things that resolve the *coagulam* ( or concretion. )

4. Sweet things are not so convenient among opening things. So that heretofore they used Digestive and Aperitive Syrups to little purpose, and used also that Method which *Heurnius* describes ; 1. They administered simple syrup of Vinegar. 2. The Syrup of the two opening Roots without Vinegar. 3. The same Syrup with Vinegar. 4. The Syrup of the five opening Roots. 5. Syrup. *Byzant.* without Vinegar. 6. Syrup. *Byzant.* with Vinegar ; from which



which follows ( as a Corollary ) the matter of opening Syrups, for each of these have their Places, and differ in Degrees ; As indeed,

5. *The degrees of Aperitives are commodiously observed; but degrees alone do not do the business, but must give place to Principles; yet we will observe two peculiar things concerning the use of sweet Aperitives.* 1. *That sweet things are highly convenient with Aperitives, where absterision is desired: as honey, and Sugar, especially in Diseases of the Breast, so also of the Stomach, do very well; otherwise Turpentine and its preparations do best, as to the matter of cleansing.* 2. *Sweet things are chiefly to be mingled among Aperitives, when the Blood wants fermentation, as Authors observe, in particular Hildebemi<sup>us</sup> spicileg. 1. de affect. cap. doth note, that Syrups do very much in the obstructions of the Menses; for no other reason, than we said before; but still take care, that you do nothing too much.*

6. *You must give them, when the Stomach is empty, neither with meat, nor after meat; because Aliments in the general are not to be confounded with Medicaments; and because they may carry the chyle not as yet well concocted into the lacteal Veins, and thrust in the excrementitious part with the alimentary, and so increase the Obstructions.*

7. *Very drying Aperients are not convenient in an Heetick, if joyned to a putrid Feaver, for they increase the rarefaction, and heat of the Blood.*

8. *They are not good in a weakness of the Kidneys, which they also hurt by too much use of them: for they of themselves abound with moisture, and ferosities of the Blood.*

7. *Avoid drying by the use of them, therefore moistening, and liquid things do better by diluting and*

tempering, which is most to be observed in Cases of the Liver, Spleen and Womb. I have often observed stubborn hypochondriacal Cases to be long, and vainly attempted with strong and dry Aperitives, and to be well, and soon cured by the use of moistners; therefore here Chymical Medicines are to be mingled with Galenical, and for the same reason they are best given in *infusions* or *decoctions*: hence *steel Waters*, &c. are so mightily potent in taking away Obstructions, because they have a resolved Salt in them diluted by much Water. Pills are more convenient when the Bowels abound with excrementitious moisture, as *Pil. tartar. Quercetan. Bontii, Schroderi*. And that we may sum up all in short; The aqueous and liquid do dilute and temper, the saline are most diuretick, the Acids are most cutting, the acrimonious (or biting things) do attenuate and resolve most; the sweet do cleanse, and the bitter do corroborate.

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BOOK

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 BOOK I. SECT. II.
 

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## CHAP. IV.

*Of Incrassatives or Thickers.*

**A**S Induration does more respect the Pores and lax Fibres, so Incrassation does more respect the moveable Humors, tho in a general way of speaking, as we hinted above, each of them may be comprehended under Astringents taken in a large sense.

*The Indicants of Incrassation,*

*Are tenuity, fluxibility, mobility, acrimony and refraction* of the Humors: for they because of viscid, clammy, gluy and sticking Parts, hinder the motion, correct the Tenuity, lock in Acrimony, and obtund it, and lenifie the Pores by their slimy-ness.

The Humors concerned are chiefly two, the *serum*, or *lympa*, and the *choler*, which if they are faulty by a thin and acrimonious Quality (which makes them unruly) among other things indicated, do require Incrassatives. Therefore they conduce much,

1. Where a Vein is broken, in coughs from thin or sharp Humors, in the consumption, and generally in most Cases of the Lungs, that proceed from a thin Humor.

2. In all erosions of the Wind-pipe or its branches, of the Membranes, of the Ventricle, of the Kidneys, &c. for they allay and correct it, whence Spigelius in the erosion of the Stomach made an Experiment of Syrup. de Symphyto Fernelii with terra sigillata, and it did the business.

3. In diarrheas and dysenteries; so that the dysenterick powder of Crata, which is very good, is made of Gum-Tragacanth, Coral, and Gum-Arabick: and traga granorum actes doth well in dysenteries.

4. In pissing of Blood, pissing over-much, and over-much Sweat, so that Hofmannus did successfully use Bole-Armenack in a colliquative sweating Sicknes and Fever.

5. In Hæticks and Consumptions, to bridle the Ferment which doth too much rarifie, and prey upon the blood; hence Snails, thick Broath, Puddings, &c. are of great use.

8. In cases of the Eyes externally, for the Eyes delight in mucilaginous things.

Incrassatives are 1. cold, watery, and mucilaginous things; as Gum Tragacanth, Gum Arabick, Cherry-Tree gumm, which is good in erosions and diseases of the Kidneys, Harts-horn Gelly, and Fernelius his Syrup of Cumphrey. 2. Those that have an earthy clammyness, as Bole-Armenack, terra sigillata, &c. 3. Those that have an oily clammyness, as Chalybeated Milk, Emulsions: the rest were reckoned among Astringents. 4. Preparations of Poppy, which are the best and most universal Incrassatives, as Syrup of Poppy, Diacodium, Laudanum, Opiatum,

Opiatum, Pil. ē Cynogloss. ( or Hounds-tongue )  
Treacle, &c. out of these you may prepare Lamba-  
tives, Powders, Pills, &c.

### *Their use, and way of Application.*

This we shall contain in one Axiom.

*Order is not to be inverted*; that is, you must not give Incrassatives, where attenuative and cutting things are necessary, especially in cases of the Breast, as namely in Coughs. The way of curing a Cough is limited by the quality of the Matter which causes it; and 'tis either thin, acrimonious or salt falling upon the Lungs, and threatening a Consumption and suffocating Catarrhs: or it is thick, clammy and viscid. In the first case Incrassatives made of Bole-Armenack, lohoch de papav. terra sigillata, spec. diaträg. frig. laudanum opiatum, &c. are convenient. In the other case, cutting bechical things, as of Hyssop, Aron-root, spec. diaireos, &c. are most useful; but if you invert the Order you may easily choak your Patient. The reason is the same in an *Asthma*, where Incrassatives are seldom convenient, but hurtful, but cutting things are good.

BOOK.

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## BOOK. I.      SECT. II.

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### CHAP. V.

#### *Of Repellents.*

**V**VE will refer to this place, because of their affinity, Repellents and Repercussives.

They are called *Repellents*, because they drive and turn Humors back again or another way, which otherwise would some way or other be injurious to the Part affected.

#### *The Indicants of Repellents,*

Are comprehended under three names ; For they either respect,

*The flux*, whether it be an efflux, or afflux of the Blood or *serum* ; hence Repellents are convenient in *all fluxes of Blood*, where it actually flows out ; as in Wounds, bleeding of the Nose, &c. for those are preter-natural ; so also in blood-shot Eyes, and in the beginning of other Inflammations, where nothing doth contraindicate. But this has place especially while the matter is fluid, moveable, volatile,

tile, and coming into the Part, and not yet settled there, or extravasated. For they are more proper for matter that is about to flow or flowing, than that which has flowed; but sometimes also this may well be: thus Repellents are highly convenient in a *Cancer*, as of Lead, Night-shade, &c. but not omitting Universals.

Or *the sense*, to wit, a painful, molesting and sad one; they obtund it, so that it may not perceive pain; so Repellents are good in an *itching pain*, as we have known a violent itching of the Testicles to be tamed and cured by cold Water. So also in the *Gout*, tho not so safely. They also have place in the tooth-ach: for if the Flux be by this means hindered, the pain must cease.

To these appertain *compressives*, which also do repel after their manner, take away pain, and inhibit the Flux of the Spirits.

Or *the Pores*, for if they gape too much, and let out the good Humors they hinder it; therefore they are good against *colliquative Sweats*, bloody Sweats, the *consumption* and *hectic Feavers*, being applyed to the back, by which means they stop the afflux, and the Pores are shut so as not to admit the Humors.

Therefore Repellents are, 1. *Actually cold things*, as cold Water, Marble, cold Iron, &c. as 'tis well known by a common Experiment, that Contusions and Knocks are so helped by it, that the Afflux of Humors are prevented. For these do as it were congeal the Blood, and render the part apt to resist; they obtund the Sense, they strengthen, and confirm, and obstruct the Pores.

2. *Acids, austere, crabbed and terreous astringent things*, and other things above mentioned; for we will not repeat here, for brevities sake. So in some  
*Tumors*



*Tumors and Hemorrhages* Vinegar doth well ;  
as also vitrioline, aluminous and styptick things in  
Wounds and Fluxes of Blood, &c.

3. *Viscous and byly*, which chiefly respect the  
Pores, as oyl of Olives and water-Lillies, Frogs-  
spawn, Whites of Eggs, Fleabane and Mucila-  
ges, &c.

To this place also appertains (tho improperly  
called *Repellents*) those things that do so *effective-  
ly*, as they stop the Pores, and reunite a matter  
that flows from the Blood, and so cause it to draw  
back, as Mercurials in the Itch, when used in oynt-  
ments which stuff the Pores.

But seeing we have spoke more largely of these  
Repellents, as to the way of *applying them* and their  
*matter*, we think repetition vain, and refer you to  
that Head. viz. of *Astringents*.

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BOOK.

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 BOOK I. SECT. II.
 

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## CHAP. VI.

*Of Drawers, Sinapisms, and blistering Things.*

**A** *Tractives* or Drawers are opposite to Repellents, for these beat off, and the other draw in the Humors to the Part affected.

*The Indicant*

Of Attractives is two fold, either according to nature, or besides it.

The Indicant according to nature is, 1. *Heat* when deficient. 2. *Nutriments*, when that also is wanted; so that they are due to Parts that want this or the other. Therefore they are beneficial in Palsies, Atrophies, and such like; because they restore the natural Heat and Spirits, and draw the Blood into the Part, that it may so gain its true tone: so in a beginning gangrene or mortification, when the Part tends towards deadness, that if possible we may restore it.

In

In both cases distilled Oyls are very good, as being also Rubificatives of themselves. Thus in the Palsie oyl of Pepper, Cinnamon, Cloves being mingled with other things to keep them from expiring, or alone, are very good; but in *gangrened* Parts, oyl of Cinnamon and Cloves are chief, as also Spirit of Wine camphorated, &c.

The Indicant preternatural (or besides nature) is various; But the principal are

Either, 1. *A serous and ichorous matter*, which attraction doth principally belong to, as when it stagnates in any Part, whether it be benign or malignant, chiefly if there be a flowing at the same time. For they evacuate, derive and draw from afar, and also revel: therefore they are good in the Ischiadica, and other Pains that lie deep. A certain Chest-maker was sadly troubled with a deep pain in his Thigh, and found no help by any thing till he was blistered, and then he was happily cured. And these as particular Evacuatives deserve a Chapter by themselves: so in Ulcers and Issues, Gentian root or root of black Hellebone, are used to make the Matter flow the faster.

Or, 2. *Vaporous Matter*, as if a Tumor should happen to be mixed of Wind and Water, tho it seldom happens. Thus in the Epilepsies proceeding from a Vapour that arises from a certain Part, as from the Feet, &c. 'tis very profitable to apply Blisters to that Part, as *Trallianus* gives an example of a successful attempt in that case, and *Henrinius* has another to the same purpose, of one that was cured by the application of the Butter of Antimony, *Obs.* 23. p. 275.

Or, (but secundarily) *the solid Parts* also, as Darts, Arrows, Bullets, &c. are drawn out, and Dittany is famous in that Case; as for example, with

there was a Student which was shot in the foot with a leaden Bullet, but could not be drawn by Instruments, and they bethought themselves of a vulnerary Potion which should help Nature, and it was happily prescribed of Dittany roots, &c, these do help Nature as they render the Humors more fluid, and dilate the Pores. To this appertains the experiment of *Archlannus*, who to draw things, that are fast in the Ears, or in any other Parts, doth prescribe to apply a live Lizard, or one scarce quite dead, and to hold it tyed to the part for threehours.

We apply them to the affected Part, unless something prohibits, when we would evacuate; to an opposite or remote part, when we would revel. Thus in blood-shot Eyes, and pain of the Head Blisters are applyed to the hind part of the Neck: so also in inflammation of the Eyes, Shepherds-purse, &c. are very profitably applyed to the feet.

### *They attract,*

Which do it, 1. *by the force of a vacuum*, as Cupping-glasses, with or without scarification, which are convenient to extract malignant Matter, in pestilential Bubo's, and such like. The same also in a *flatulent Colick*, and hick-cough do draw and discuss. So also by *Heerius* his Experiment, they may be very conveniently used to draw Blisters; if you permit them to stick long to the Skin, and repeat the Flame every quarter of an hour, they'll draw Blisters in an hours time.

Or, 2. *By reason of pain* pricking with acute and sharp Particles: thus rough Cloaths, Frictions and Urtications do draw, which are of frequent use in Paralyticks and Atrophies. But the pain helps the attraction; and calls the Humors to it, as it doth irritate

irritate the Archeus, and because it follows Acrimony and Heat; therefore we have no need to speak any farther of this matter. They benefit in all soporifick Distempers, Lethargy, large Hemorrhages, &c. Some add,

5. *Suction*, as that of the Leeches; notwithstanding in that case there is a manifest evacuation, and therefore that *drawing* hardly takes place here.

6. Or, which properly belong to this place; by a *fiery and burning Quality*, as they carry with them a kind of an occult fire, or rather acrimonious Salt; they are chiefly full of volatile Salt, so that Attractives are hot from the second to the third and fourth degrees; they have a tenuity of Parts, but locked up in a terrestrial Substance lest it be too soon dissipated.

These therefore with their acute Particles pierce the Skin, irritate the Archeus, call in the Humors; yea the Humors are referated and made fluid by them, and the Pores dilated, so that the Humors come down freely, and hence it is that they gather most of all into those Part, that are thus pierced, or as it were burned.

Hence you may perceive the great Latitude of Attractives, because all that Rubifie, all things that raise Wheals, and Pushes, all Vesicatories, and Causticks are of this kind.

For they differ only in degrees; therefore Attraction may be the *Genus*, and all the rest so many *Species*; for more or less do not vary a Species. Hence Blisterers in a lesser quantity do only draw, and rubifie; and Rubifiers in an intense degree do blister.

† *The more mild*, are those, which are hot in the second degree, *The middle sort* in the third degree, and *the strongest of all* are hot in the fourth degree,

as

as Causticks, and Escaroticks: for the hotter the Medicament is, the stronger it draws.

Hitherto in some sense do belong those things that draw humors into the Mouth, and these are called *Aphlegmatisms*.

All of them abound in Saline Particles, sometimes very plain by themselves, sometimes mixt with Sulphur, and 'tis notable, that Blisterers, and such like, that do such feats upon the Skin, do not do so in the Stomach; as Onions, Garlick, Mustard, &c. nor doth the Stomach so soon find hurt, as the Cuticle doth, and their force is soon subdued by the heat and ferment of the Stomach.

Some of these are applied to the Hand-wrists to prevent Fits in Agues, as Garlick, Mustard, Crows-foot, Pepper-wort, Dittander, &c. Some draw out Darts, as Daffodill, Dittany, Gumm of the Ivy, &c. Some do more draw the Nutriment, as gummy things, Ammoniacum, and such like; Some are Vesicatories, as Cantharides; Some draw Humors into the Mouth, as Euphorbium, Pellitory of Spain, &c.

Here you may note the Names, that some of these drawing things have, as a *Sinapisme* (from its basis), and *Dropax*, or Pication, which differ only in degrees; for the stronger *Sinapisms* do induce an Elchar, therefore they are applied in a narrower compass; and the other being more mild are applied sometimes to a whole Member, of which elsewhere. They are termed as it were Evellents of the Hair; altho Hair-drawers (or *Psilothra*) are things different from these.

The more select among them are *Mustard*, which *Hartmannus* does only order to be put in a bag to the hind part of the Neck against Pains of the Head; *Cantharides*, and *Leaven*, which, according to *Galen*

*len's* praise of it, is a very strong drawer, for in it the saline Parts are eminent, and it has also a force to mollifie by its glutinous Mass, and so cause the saline Particles to enter the better into the Pores; some use Figs in these cases, as an Ex-  
cipient.

To this place are also to be refer'd *acid things*, as Vinegar, &c. for *tho* they are numbered among Repellents as they hinder Humors to flow; yet because of their sharpness, or erosion, they may well be joined to mild drawers. So is a good drawing Cataplasim made of Leaven, and Vinegar; 'tis good in many sorts of Pains, as in the Pleurisie, Head-ach, Hickup, Vomiting; especially if mixed with Aromaticks, in laxity, or swelling of the Uvula, if applied with Amber to the side of the Head.

The more mild, and rubefying do well in the Palsie, Atrophie, &c. where Urtications chiefly have place, and other cases spoken of before.

### *Vesicatories (or Blisterers)*

As considered specially have their Name from the Effect they produce; for they raise Bladders, sometimes one great one when they operate rightly, and sometimes several little ones.

The most common and usual *matter* is *Cantharides*, which are of two sorts, either the German, or Spanish, new or old; the Spanish, and the new ones, are preferable to the others.

Cantharides are accused, that they are very pernicious to the Bladder, not only taken inwardly, but applied externally to the Head, because of their highly acrimonious Salt; yea and that externally  
applied



applied they sometimes ulcerate the inward Parts and cause pissing of Blood.

'Tis true indeed, that taken inwardly unless very warily done, they do hurt the Bladder, cause a violent heat of Urine, pissing of Blood, and other mischiefs, but these things happen very seldom upon the external use of them, and perhaps to them only that have a very fine texture of Body, that the Particles do thereby penetrate deeper, and communicate themselves with the Blood and Serum, and so are carried to the Kidneys. But we truly never observed that Effect, tho we have often used Blisters.

### *The external Form.*

Cantharides are applied, either in the form of an Ointment, as for example, with Treacle; but very seldom with fat things, for they obtund its attractive force: or in the form of a Cataplasm (or Pultifs) adding Leaven, and Seeds of Bishop's weed, which are reputed as the true Correctors of Cantharides; but 'tis not of such effect, that it need be always added; I should think it helps the attractive vertue.

The applying them in the forms of Pultrisses have this Inconvenience, that they must be always new made, nor do they stick so well to the Skin, but they sometimes spread beyond their limits, &c.

A rubefying Medicine, or mild Vesicatory may be made after the following manner.

*Take of yellow smart Mustard seed two drams of Euphorbium half a dram; Leaven and Vinegar of Squills of each alike, and as much as sufficeth to make it up to the form of a Pultifs.*

A strong one.

Take about half an Ounce of strong Leaven, of Cantharides after their wings and feet are cut off (which is reputed for a Corrective) half a dram, one blew Fig, Bishop-weed seed a scruple, plain Vinegar, or Vinegar of Squills, as much as will be sufficient to make a Pultifs of it.

Note that whereas Cantharides are very light, insomuch that 50, or more will not weigh a Drachm, you had better prescribe them by weight, than number, which indeed is always done, unless it be when a very mild operation is required.

The question is, *Whether Vinegar which is commonly added, is rightly mingled with them?* It makes for the Negative, that Vinegar doth fix acrimonious volatile Salts, and break their acrimony, as we use Mustard macerated in Vinegar for sauce, which would otherwise be intollerable: Onions, Garlick, and Horse-Radish are made more mild by Vinegar. Whence *Martianus* very well concludes in the Negative. It may be added that Vinegar doth repel, and is cold, which is contrary to the indication, especially where malignity concurs.

The thing may be easily decided if we observe to use a small quantity of Vinegar, and the form it is used in: For thus it (by its sharpness) increases the force; nor, being dispersed through the whole body of ferment or leaven, can it possibly dull the force of the Cantharides, but it may be a corrector; therefore in this form a little Vinegar, tho it doth somewhat allay the force of the Medicament, yet it doth not hurt; some choose Spirit of Wine.

But the best way to use Cantharides is in a simple Plaister of Wax, and Turpentine without Vinegar; or with some other Plaister, as the *green defensive of Wurzius*, &c. or the *blistering Plaister of Horstius*.

This

This being applied in a due bigness after 4, 5, or 6 hours, it raises a Bladder, which is to be cut, and a Cabbage-leaf is commonly applied to it until it heals: or the *Plaster of Frogs spawn*, or *Plaster of Ceruss*, to mitigate the Pain; for which purpose *Riverius* his *Ointment of Elder in Obs.* p. 657. is very neat, and good.

For the better Revulsion, and Evacuation, that the Flux may continue longer we mingle a like quantity of a blistering Plaster, and that of Ceruss, or Frog-spawn Plaster, which defends and at the same time continues the Flux, by which means we keep them running a Week, or a Fortnight, as we have occasion: 'tis hard for common Barbers, and such People to do these things.

Hence it appears, that the use of Blisterers is very great in Defluxions from the Head to the Eyes, Ears, and other Parts; in Megrims, Bloodshot Eyes, Malignant Fevers, Ischiadica, deep Pains, &c. As to the place of applying them, they are put behind the Ears, on the back part of the Neck, sometimes on the Coronal Suture, and on other Parts that are fleshy. See *Adynsicht Arnam. Chym. Sect.* 29.

### *The way of using them rightly.*

As to the use of Attractives in general, *Galen's* Rule is to be noted, *Lib. Art. Med. cap.* 85. two thingt, says he, do invite to the use of hot and acrimonious things, *the upper Parts which suffer, and the deep Parts that want.*

There being an Indication, we must farther consider, whether they are to be applied? Thus they are not convenient, 1. Unless it be after Universals. And herein they agree with *Diaphorotics*.

If therefore these, and Discussives be used before, and that without success, Blisters may supply the place of them.

2. *Where the Flux is vehement they are not to be used;* for there the Flux will be increased, and other Symptoms induced, as a Fever, Pains, Watchings, &c. and why should we torment the Part in vain? And therefore in that case Repellents, Discutients and Allwagers are more convenient.

3. *Nor, where there is an Inflammation, or the Part weak;* for as they are applied only to the Skin, so if it did suffer before, we must not add Affliction to the afflicted. So we must cautiously apply Attractives to Legs that have mattery Tumors, or are Hydropical; for most commonly a Gangrene follows.

4. *Nor to the Joints, lest they be too much weakened, and a Flux brought thither.* Therefore they are vain, and hurtful in Arthritick cases; I have seen a Weaver, who, when his Hands were troubled with a Scorbutick Gout, used Urtication, and had thereby almost lost the motion of them. But the more gentle do not hurt, as Baths of Ants; for what they discuss, they bring out, and at the same time strengthen.

5. *Nor where the Matter is disproportionate.* Thus I have known a Physitian apply Blisters to the Belly of an hydropical Woman, which caused much Pain without any Ease.

6. *If they are applied to draw Nutriment, Plaisters are best.* Lest that which is drawn for the use, and vigour of the Part may transpire, as after Frictions and Anointings; Cumphrey roots boiled, and applied in the form of a Pultis is very convenient, as *Hartmannus Pr. Chymiatr. cap. 13. 4.* doth prescribe.

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 BOOK I. SECT. II.
 

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## CHAP. VII.

*Of Causticks, and Corrosives.*

**T**urning from Blisterers which consist mostly in volatile Salts, we light upon *Causticks*, which also have a great Latitude and several Names.

In general *Causticks* are applied to a *wholsons Skin*, or to a *divided and sore Skin*; that, the first way applied, they may corrode, and induce an Eschar, and in the other case cleanse, eat out, and consume; *Caustick* is a common name; but there are several degrees of them.

*The Indicant.*

Of Corrosives is 1. *A drawing of vicious Humors.* That they may be evacuated, derived, or revelled :  
 2. *A taking off of Preternatural Excreescencies in the solid Parts.*

The Skin being divided, and in an ill condition they are most to be used, that are of the *first degree* Cleaners, and Dryers without any notable Pain; as Pompholyx, Shells burnt, the Magistery of Saturn, Lapis Calaminaris, Cerus, Mercurius dulcis,

Lac Virginis (or Virgins Milk) a Liquor of Litharge, of quick Lime, &c. which scarce deserve the Name of Causticks, and do act principally because of their drying, earthy, metallick quality, with a saline force obtunded, and weak; and these are much used in moist Ulcers, and sordid ones which hardly come to an Eschar.

They are Corrosive in the second degree, or eminently extergent and eating, (and they are either dry, liquid, or of a middle sort) which besides their earthly Particles do more or less abound in saline acrimonious Parts; they are taken from Vegetables, as the Powder of Savine, which is excellent for a Fungus of the Brain, Warts of the Yard, &c. its ashes also, and the ashes of Tabaco, which is often used with success in Ulcers; from Minerals, as burnt Alum, white Vitriol, the *Caput mortuum* of Vitriol, precipitated Mercury, and things prepared out of these, as the Oyntments called *Aegyptiacum*, *fuscum Wurzii*, the green water of *Hartman*. Among these the dry ones consume that which is superfluous, and are therefore convenient for Carbuncles, and fungous flesh, they take away Protuberancies, they cleanse soft places, and hinder the Generation of extraneous Excrescencies, they purifie Moistures, and carry them off by cleansing.

Note, 1. That drying abstergent, terreous and sulphureous things, are best in cases of the Nerves; as in their Punctures, &c. therefore an excellent Powder in this case may be made of Birthwort, Euphorbium, Lapis Calaminaris, and Iris-root, &c. such as is to be seen in *Scultetus*.

2. The same, the oily especially, the biting and ethereal are convenient for rottenness, and corruption of the Bones, as Euphorbium, which is excellent, so oil of Cloves is good; tho fat and oily things are

are accounted, and indeed are hurtful to the Bones for the most part.

3. *The saline are more convenient for loose Tumors, and putrilaginous.* As the Caustick, called *Lapis Medicamentosus* in Ulcers; of the use of which *Crollius* among others speaks very largely. These also profit much when the Gums are Putrilaginous; as for Example, the aforesaid Stone in Privet water, or Plantane, or Tormentil water, burnt Alum, with Honey, and Nutmeg, the Powder of Columbine, &c.

*To a whole and sound Skin*, Causticks properly so called are applied, which have a potential Fire in them potent enough, being actuated by the natural heat to induce an Eschar.

For as it is well known, that *Cauteries* are twofold; *actual* which are with Fire, *Potential* which are with Medicaments: so these Potential ones are otherwise called *Escharoticks*, because they induce an Eschar or Crust; Corrosives, Erodents, and Ruptories, because they break, and penetrate the Skin.

These are wont to be applied to a divided, and a disaffected Skin, in several cases, as in Tumors, fungous Ulcers, &c. in order to eat, or take away some part; yet the custom was to apply them to a whole, and sound Skin for another end, that is, to evacuate noxious Humors; therefore these make Issues, break Abscesses, and Apostumes, where the Iron is seared; and the Matter is fit to be let out, &c.

We therefore presuppose, that these act by a saline force, exceeding in one extreme or other, for they are either *Alcaline*, or acid, with this difference, that the Alcaline cause a black Eschar, but Acids, because they obtund the Sulphur, do cause a white



white one, both being actuated by the natural heat; for neither do Blisterers raise a Bladder, nor Causticks an Eschar in a dead Carcass.

They resolve the Skin into a Putrilage, as soon as they are moistened, much after the same sort, as quick Lime doth Cheese, as *Hamel* speaks.

The select and best *Alcalines* are, the *Corrosive Stone*, whether out of the ashes of the Ash-tree, as *Simon Paulus* would have it, or of the strong Lye of Soap-makers; 'tis improperly called a Stone, and in truth, is nothing else but a most brisk *Alkali Salt*, therefore the Vessel is to be stopped in which the Stone is kept, lest the Air dissolve it; when 'tis to be used, 'tis to be wetted a little with spittle, that it may pierce the better. So 'tis true here also that *Salts* do not act unless dissolved, at least not with the same force.

It is a weighty Question, whether any Cautery may be without Pain? and it is rightly answered, if we speak comparatively, that it may be; for those which are of greatest activity, and quickly corrupt the Part, cause little or no Pain. Such a Cautery is the Crystal of Silver prepared with *Aqua fortis*. We see such things to happen not only externally in a Gangrene and Mortification, where we may as it were mechanically, and elegantly conceive a Caustick Salt, and a Corrosive; but also in a painless Dysentery, when the acrimonious Matter falls so suddenly upon the membranous Parts, that it takes away all sense, and then it is absolutely fatal.

To these Causticks appertain *Arsenick* and *Orpiment*, which are Poisons no other way than by their corrosiveness, yet they are not, nor ought they to be used unless well corrected, and mitigated by Niter, nor are they to be used about the noble

noble Parts; but allayed and fixed, and as it were dulcified Arsenick has its use even in the Cancer it self.

Among the *Acids*, the *Butter of Antimony* claims the chieftest place, and then other things, as *aqua fortis*, *Spirit of Vitriol both simple and philosophica*, *oyl of Vitriol*, because it is the concentrated Spirit, and has the same Parts, &c. so also sublimated Mercury is of the same kind; there are a kind of middle sort of Corrosives, as *magnes arsenicalis* made of Arsenick, Antimony and Sulphur.

These things are convenient in opening of Bubo's pestilential and venereal, and other Tumors, both benign and malignant.

So in gangrened Parts they separate the corrupted Part from the whole and sound, as Butter of Antimony is most convenient in that case. See *Hartman's praxis*.

So they are convenient in fordid, winding and fistulous Ulcers, to take away the callousness, without which no Cure is constant.

To this appertains all the benefit that is to be had by Issues.

Some of these Causticks are convenient in Hemorrhages, as Vinegar, Spirit of Vitriol, &c. which in letting of blood, &c. do stop the Flux; so white Vitriol and Alum do, because together with their Acrimony they have a constipating Quality: but you are not to trust those things, that are sharp and acrimonious; therefore if the Question be asked; *Whether Causticks and Corrosives are to be applied to stop Hemorrhages?* as for example, sublimated Mercury, Arsenick, &c. *Mindererus* doth absolutely deny it.

1. Because they irritate the Wound.
2. They induce great Symptomes, and sometimes death it self: and he adds that they do at first constrain and bring

bring the Veins together with their corrosiveness, but afterward they corrode like infernal fire.

Thus also they in pocky Excrescencies, Warts, Moles, &c. are very convenient to take them away, if warily applied.

### *The way of Applying.*

1. You are not to come to *Causticks* (especially the stronger sort) unless you have a very urgent indication; hence it is that they are more safely used to a whole Skin, and when the natural strength is good, than in a preternatural state.

2. They are less convenient for the very fat or very lean, but more convenient for the fleshy: for in the fat they easily draw a flux, and in the lean consume the good Humors; see *Rhodius analect. p. 618.*

3. In respect of Age, they less agree with Children and Infants, because of their tender Bodies; which cannot bear severe Helps; for *Causticks* do often consume the Nutriment.

4. They are not convenient for delicate Parts, as the Eye, nor to extreme Parts, tender or inflamed, nor to the Joints, or nervous Parts. For here they must be warily applied, lest a Gangrene follow, or lest the Vessels be hurt, as Veins, Arteries, Nerves, or least the Tendons be any way injured; therefore Issues are best made in meetings of, or places between the Muscles. But if there be urgency, as Matter to be evacuated, or some thing that is noxious to be taken away, you must not omit them: Thus to break Abscesses in the Breasts, and in many other cases, they are of use.

5. Take care, that they do not act too little or too much. Therefore the adjacent Parts are to be defended,

fended ; hence it is, that in the making Issues, after the place is marked out, we defend the other Parts by a Plaister, that has a hole in it, put first on, and then the Corrosive ; so if Butter of Antimony be applyed, 'tis put into the cavity of a Quill and then put to the Part ; a strict Ligature is convenient in this case, and prescribed limits ; so also Velicatories are sometimes circumscrib'd with a Nut-shell, and actual Cauteries with an Iron plate ; therefore the limits of the *erosion in taking away Parts*, are to be ordered according to the Laws of the natural State ; *Of bare erosion*, by the Flux which must be perfected, and the Eschar is not to be taken away presently ; but when it begins to change, and is brought to maturation by a digestive Oyntment, then it will fall, or you may take it off, and then you must keep the Ulcer open.

6. *They are more convenient in cold Cases ( for evacuation ) than in hot, because thin Humors are more thin'd by them.*

7. *You must abstain from Causticks in the Hemorrhoids, and in Distempers of the right Gut : because they cause a greater Flux, and the Part is tender and delicate.*

8. *In an exulcerated Cancer they are dangerous ; and 'tis better to abstain from them in all Tumors that seem to emulate an occult Cancer. For a Cancer is not to be irritated ; therefore Aphor. 38. l. 6. is to be received as an Oracle. Those who have many Cancers, had better not to have them cured, for being cured, they soon dye ; but live longer if they be not cured. Hence Heurnius in his Commentaries, says well, that if we would chastise a Cancer with Causticks, another will rise ; because in Cancers the Poyson is corrosive, and will eat up all the adjacent*

jacent Parts; we have seen sad examples of this kind; therefore take especial care in these Cases.

9. *Causticks must be used when other Medicines have failed, and the Body must be well prepared, by universal Evacuations and Cleansings.*

As Drawers and Blisterers draw out the *serum* from the subcutaneous Glandules, which are almost innumerable, and do, as it were milk out the Humors; and Causticks do eat up the very Pores, the Cuticle, and the Skin it self; so *Septicks*, or Putrefiers improperly so called, differ from Causticks only in degree, because they do more intimately destroy the natural Heat and Moisture of the Part.

On the contrary *Smootherers*, which agree much with Emollients do stroke up, or make even exasperated Pores; such are chiefly oily, temperate, sweet, gummy and mucilaginous things; these allay Acrimony, both inwardly, and outwardly; and kindly lenifie divided Parts.

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 BOOK I. SECT. II.
 

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## CHAP. VIII.

*Of those things that unroot Hair.*

**T**hey are of little use in Practise; so that 'tis more profitable to know them, in order to avoid them, or that we may cure the hurt done, or prevent that which may be done by them, than to make use of them. Yet sometimes the Physicians advice is asked for extirpating of hair; altho the success is not very constant. In this case the common thing used is, that which is made of *quick-Lime and Orpiment*, or Mynsicht's Oyntment of *Quick-lime*, which you may see in his Book.

The Turks have a thing they call *Rusma* which they use in the Baths to unroot their Hair. Altho some do think it a kind of Mineral very like the Dross of Iron, or that it is of the nature of Vitriol; yet 'tis not likely that it differs from the known Medicine above-named. They use it to anoint their privy Parts to take away the hair; and apply it just when they begin to sweat. But the hair does grow again, as may be proved.

These are also Causticks; but a middle sort,  
which

which eat round the Pores, and render the viscid Nutriment of the Hair fluid and thin, and then 'tis drained out. Some talk there is of an Experiment of Dr. *Faustus*, that a Part being anointed with the Gall of an Eel, the growth of Hair will be prevented; but tho the Hair be unrooted, 'tis a hard matter to have this business succeed always, or to have such a thing as *Helmont* boasts of, that is, A certain Liquor, that if a Man's hand were a little wetted with it, and afterward dryed, yet if he touch another Man's Beard with it, all the Hair of his Beard would soon fall off; and not only so, but of all his Eye-Brows and Head; these things appertain to Cosmeticks.

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## BOOK. I.      SECT. II.

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### CH A P. IX.

#### *Of Traumaticks or Vulneraries.*

**M**aturatives and Suppuratives do not belong properly to Wounds; but they are convenient to open Abscesses; but the Wound being made, *Digestives* are of use, and such as are agreeable to the Humors, as we said, when we treated of Emollients. But here also

*Sup-*



*Suppuratives and afterward Digestives* have their use, they are, 1. *Very like our natural Heat*; as being hot and moist, so that Pultisses, fat things, Mucilaginous, and other things spoken of before, belong also to this Head. 2. *Emplasticks*, which obstruct the Pores, keep in the natural Heat, and strengthen it.

Hence we are to see. 1. *To which Tumors Suppuratives are convenient*; and 'tis to the *Sanguineous*; which are therefore the *indicant* in this case, for Blood extravasated turns to Matter or Quitter; the Tumors that differ from these do less require them; or where the Collection of the Blood is so, that it causes no Tumor, and may be discussed, and caused to return to the Mass of Blood; therefore one cannot use them without hurt in an Erysipelas. So they scarce do any thing in malignant and venemous Tumors; but are no way convenient for atrabilious Tumors, as the Cancrous. Nor are they very convenient, where the Parts are weak, or to the internal Parts when there is an extravasation; for then you must only resolve the Tumor, as in the Pleurisie, so that they are properly only external Medicaments; but internally those things that concoct, and mature the Humors are allowed.

But they are most profitable in Boils, Abscesses, and such Tumors as tend to them, proceeding from Blood: or at least not without Blood, as in glandulous Tumors which are hardly brought to suppuration.

2. *You must see, whether you can hinder it, before it be indicated*, either with Discutients or Resolvents, &c. if not, it is nimbly to be promoted, and nature to be assisted by good suppurating things.

H

3. *Dryers*

3. *Dryers are not convenient among Suppuratives,* because their Natures are contrary. But you must see

4. *That you do not make your Ulcers sordid;* therefore let them be moist, but not over moist.

Out of what is said here, and in the Chapter of Emollients you may perceive the Force, the Matter, and the way of applying them.

As to *Vulneraries* in general, they are either Internal or External, and both are indicated from solution of Unity in general, whether they be Wounds made by cutting or pricking or *contusions*, especially with hurt of the inner Parts; or *Ulcers*, as of the Lungs, Fistula's, &c. or *Ruptures* or *Orifices of the Vessels opened*, as in a Vein broken, in pissing of Blood, Bloody flux, Falls from on high, &c. in all which cases Vulneraries are highly proper, in any form; as Powders, Extracts, and especially Potions.

As to *their way of Acting*. Presupposing the Blood to be the Aliment of all Parts, it will be necessary, that the Unity being hurt, the Blood should be concerned, and therefore, we must have respect to it, that it may the better dispose the hurted Part for consolidation.

They are chiefly of two sorts, 1. Of an *alkaline nature*, which *Helmontius* doth in a more especial manner largely discuss. For he (not unadvisedly) stated an Acidity in every Wound (by a certain Analogy, as we shall speak by and by) which Acidity he makes to be the Mark, and Concomitant of all Putrefaction in the Flesh, this Acidity Alkalies do easily absorb and consume; hence it is that all Vulnerary Potions have an occult Aleali, and that Volatile, if it must resist the Accidents that arise from the corruption of the Acidity,

dity, because an Aleali destroys all Acidity that it meets with; and vulnerary Herbs do operate (as he says elsewhere) by the vertue of an innate Alkali, therefore he says also that Vulneraries are Diureticks, and Diureticks Vulneraries.

Here we may easily apply an elegant Place of *Galen's lib. 2. Aphor. Comm. 17.* of the sharpness of the Blood; where he says, that what happens in Wines, that grow sour, happens also in the change of the Blood; seeing therefore that in Wounds the Tone of the Blood is altered, and that the Blood doth necessarily concur to the healing of them; therefore they are Vulneraries, that absorb Acidity, and preserve the Tone of the Blood; which temper sharp, and serous Humors, and moderately cleanse them. Those are the Alkalines which we spoke of before, as Crabs-eyes; which help much in the Wounds above-mentioned, and being boyled with Wine acquire a lixivial Taste. So *antimonium diaphoreticum* does great things in external Ulcers if it be taken inwardly; so the *an-ti-hæctick* of *Poterius* is good in a Consumption for the same reason; and they are called Vulneraries, that either have a nitrous detergent Faculty, or a binding terreous Quality, which respects the Tone of the Blood. Whence *Spigelius* says, that many Plants conglutinate fresh Wounds, yea, that he dares to affirm, among all Plants one in three to have that vertue. He speaks chiefly of the external use of them, tho'tis true also of the Internal. Such Internal ones are, Speedwell, (or Fluellin) Betony, Ivy, Ground-Ivy, Winter-Green, the root of Prime-rose, of Figwort, &c. and preparations out of these, as Waters, Essences, &c. Such is the vulnerary Essence of *Rosfincius* described in his *Chymia*, (which you may see;) Extracts, as the

Extract of Winter-green, of Sanicle, Scabious, simple and sugared; which are very good in a Consumption. These resist Putrefaction, and reduce all Ichorousness into Order.

2. *Of a Balsamick Nature*, which both with their oily volatile Salt, and binding Quality do strengthen Nature. So *Febure* doth somewhere in his *chymical Tract* report, that a certain Chirurgeon did in all Wounds immediately exhibit Nutmeg to be drunk up, that by its balsamick Quality it might confirm the Blood, and that all things might be the better disposed to consolidation; but take care that you do nothing too much.

These also do great good externally, and immediately applied. So do also sulphureous Balsamicks, as Balsom of Sulphur in cases of the Breast, natural Cinnabar, the fixed Sulphur of Antimony, the Balsom of Antimony, &c. are very good in the same Cases; though these Internals do not direct themselves materially to the Wound, yet they so dispose the Blood, that the Wound may be more apt to Coition. For this Internal use vulnerary Potions are of great use, and not to be neglected in great Wounds and Ulcers.

Notwithstanding you are to note, that they are not so convenient. 1. *In the beginning* while the Afflux lasts, lest the Humors be thrown over-much to the affected Part. 2. *In Wounds of the Head*, which do more require Dryers externally, and internally nervine Absorbents. But are convenient when the Joynts or Intrails are hurt, for they resolve the grumous Blood, and confirm its Tone. 3. You must have respect to the Stomach, that it may not be spoiled by the use of them.

It is to be noted, That these Vulneraries are also Resolvents or Dissolvents of grumous Blood for

the most part, and that, in both kinds, as Crabs-eyes, Sarcocolla, Myrrh, Yarrow, &c.

External Vulneraries are of the same kind, as *Sarcoticks* (or breeders of Flesh,) and such are

1. *Moderate Dryers*, of an earthy, and saline, or alkaline Nature, as Ceruss Pompholyx, Litharge, &c. which also gently bind and corroborate, take away Impediments, consume the superfluous moisture, and confirm the sides of Wounds, and the Flesh, that it may be like wholsom Flesh, and not grow luxuriant; whence Wounds and Ulcers are made apt to come to a Scar.

So only *Lint* in many cases is of use, as in the hurts of the Nails, or wounds of other Parts that have no Flesh.

So Powders of that kind do often heal, and consolidate base Ulcers by consuming their moisture, and helping the laxity of the Flesh, as I have often observed; Therefore let it stand as a rule: *Where Ulcers abound in superfluous moistures, there moderate Dryers, and Confirmers are most proper, and much beyond oily and emplastick things.*

Thus Crabs Eyes powdered and Sugar, Cure green Wounds, for it doth presently as it were season the Flesh, and the Parts hurt, that they lose nothing of their Balsamick Nature, nor grow purulent.

So have I consolidated an Ulcer caused by the suppression of the Menfes, only with a Powder made of Ceruss, Nihilum, Lac Lunæ, Myrrh, &c. such as *D. Major* describes. I knew another who with Pompholyx alone cured an Ulcer, that was thought to be incurable. I lately cured a Woman that had many eating base moist Ulcers, that continually wept, with Ceruss alone; but if the Ulcers be yet more moist, and the flesh grow much

much, Confringents will be convenient. So burnt Allom doth excellently remove those Impediments, and potently dryes up all humidities, so doth white Vitriol, and other things.

So in Wounds of the Head, they are all in all that are moderate Dryers, and on the contrary all oily fat things, all Emplasticks, &c. are not convenient, unless perhaps one would use such a thing that is also nervine, as Balsom of Peru, &c. along with the Dryers.

2. *Balsamicks*, whether *gummons*, and *simple resins*, as St. John's-wort, Aloes, Gum Elemi (which is excellent for Punctures) Mastich, Frankincense, &c. or,

*Oyls*, either *pressed out*, as the green oyl of Elder, which is internally an excellent Vomit, and externally a vulnerary; or *boyled*, as the oyl of St. John's-wort, which is of a bloody colour, oyl of Costmary, of Adders-Tongue, &c. or *destilled*, as the stinking oyl of Tartar, which doth consolidate most powerfully, and is a tryed thing, as well in Resolutions, as Contusions of the Nervous Parts, and may be easily boyled up with wax into a Plaster: the oyl of Turpentine, which Empiricks say will consolidate Wounds in 24 hours. And *Balsoms* either *Natural*, as the Indian, that of Tolu, Capaiba, &c. or *Artificial*, as the vulnerary Balsom of *Midererns*, which is made of Turpentine, Gum Elemi, oyl of Wax, &c.

Or, Plaisters, as the Plaster of the Apostles (or *Apostolorum*,) *de Dei Gratia* (or of the grace of God), *de Nimia*, *de Beronica*, which is much esteemed in Wounds of the Head. And indeed you'll find almost all Plaisters to agree in this, that they defend the Wound from the Air, and gratifie the Part by a drying Balsamick quality, and in this sense

sense Saturnine Plaisters ( or of Lead ) are most famous.

Note from what is said, that it doth not follow, which *Sylvius* said to be *probable*, and others absolutely affirm, that every Ulcer is from Acids. For they are rather from biting acrimonious things, by the example of Blisterers, and Escharoticks, nor do Acids any otherwise than under the title of acrimony concur to the causing of Ulcers. What has been said of the *Helmontian* Acid, &c. has place sometimes, but for the most place Analogically, as it denotes the Part to recede from its Balsamick nature, and to incline to a rotten ripeness, or extreme Putrefaction.

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## BOOK I. SECT. II.

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### CHAP. X.

#### *Of Conglutinating Things.*

They do not differ in respect of their strength, and force from Sarcoticks, and Epuloticks, for they are either Drying, or Balsamick; but they differ, 1. In Degrees, for Glutinatives are dryer than Sarcoticks: and Epuloticks dryer than Glutinatives, that is effectively. 2. In their Successive Effect, for they follow in order; there cannot be



Conglutination without the flesh is grown, and fills the Cavity, and there cannot be Cicatrization without Conglutination.

As therefore to conglutinate is nothing but to unite and joyn together, so Glutinatives are indicated by the failures in unity, as green Wounds, and bloody ones, Fistula's, Ulcers, &c. (the Impediments being first removed), so Ruptures, Fractures, &c.

Very gaping Wounds do chiefly indicate Glutinatives, 1. That the Lips may be brought together, 2. That being brought together, they may be made firm; they supply an unbloody, and dry suture, where sutures have no place, as in the Eyelids, &c.

But these Glutinatives are most convenient where the Skin is only affected, or in shallow Wounds and Gapings; but where the Wound is deep, and grievous, the stitching Instrument is to be used.

### *Glutinatives are*

*Dry things*; as Crabs Eyes, *Lapis Calaminaris*, Antimony. 2. *Adstringents*, as Tormentil, Cumphrey, Pomegranate Flowers, and Rind; Bole Armenack, &c. 3. *Viscous, and Emplastick*, as Dragon's Blood, Sarcocolla, Starch, and volatile Meal, or Flower, &c.

### *The Way of Applying them*

Doth not vary, partly from those we have spoke of before, and partly from what we shall speak of Epuloticks, or inducers of Scars.

BOOK

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 BOOK I. SECT. II.
 

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## CHAP. XI.

*Of Epuloticks (or Inducers of Scars,) &c.*

**W**Hat Callosity is in hard Parts, as in Bones, that a Scar is in soft Parts, as in the Flesh. Hence it is, that *Cicatrizers*, and *Inducers of a callosness*, are the very same Medicaments.

They are Indicated as the last things that compleat the Cure of the solution of unity.

Therefore Epuloticks are *Dryers* (and that in a higher degree than Sarcoticks, and Glutinatives) which do contract and constrain the Flesh, condense and harden it, and so bring it to a Scar, and these are strong Dryers, consisting of fixed Saline, and terreous Parts, so that they moderately heat also, but without any biting, or pain. Note, that in these you must avoid, 1. *Abstergents*; 2. Biting acrimonious things; for these cannot be numbred among Epuloticks but by accident, as they do somewhat melt the flesh, and bring it together.

Let therefore Sarcoticks, and Glutinatives go before, and let Epuloticks follow. Tho this cannot, nor need it be observed so strictly always, seeing we have many things that will do all the three;  
or

or indeed 'tis the work of Nature, which is only helped by these external things, that it may succeed the better, Impediments being removed.

Hence you may note *à Priori*, 1. That some Wounds, and Ulcers are more easily consolidated, some with more difficulty. 2. That some Cicatrifications are trusty, constant, and perfect; some treacherous, palliative, momentaneous, and imperfect. And this happens either by the fault of the *whole*, as a Plethory, or Cacochymy (or ill habit), therefore to promote a Scar in this case you must have respect to the whole; so Purgers, sometimes Blood-letting, and other Universals, conduce to the Cure of Wounds and Ulcers; hence we see that Cicatrization is very difficult, in the Scorbutical, Cachectical, Hydropical, in Fistula's, in Ulcers; where the Veins are full of gross, and melancholy Blood, in Cancrous Ulcers, &c. for when Ulcers are fed from other Parts, they find the Physician work enough to do, especially if he doth not drain the Fountain by Universals; and these Ulcers are often as it were Issues.

*Or by the fault of the Part*; either because 'tis hollow, and not replete, or because of callousness, or defect of the Flesh in growing, or that the Flesh is luxuriant, which is to be taken off; or where the Wound, or Ulcer is ill-natured, or malignant; the afflux, and distemperature is to be taken off, and if there be any acrimony, 'tis to be mitigated; or if the Bone be faulty, or carious (that is, perished) or there is something separated; as long as these things lye in the way you'll have either no Cure at all, or only a treacherous palliative Cure which will not last long; no perfect Cure is to be expected till the Bone that is in fault, be taken away, altho it were the least as may be, or if  
the

the place be not made absolutely clean, before it is healed up, for the vitious Matter left within will cause a new Work; And they are very hardly cured, where the sides cannot well be brought together, as in round Wounds, &c.

Note, that you must often use delays in this case, until Nature in good time works out the little Bone, &c.

These Impediments being (tho with trouble) taken away, you may proceed to *Epuloticks*, which finish the Cure; nor is there any need, that we should delay by recounting these things.

But you must note that the dryness of your *Epuloticks* is to be moderated, as the Part you deal with requires, as it is more lax, moist and soft, or dry, and of little Flesh. Thus have I often in little Ulcers of one of the outer Coats of the Eye, which is called (*Tunica cornea*) used very fine Powder of Pearls, with great success; and *Canary* Sugar blown into it: using also the fat of Vipers which is most approved of. So in Ulcers of the Lips, a light application of Spirit of Salt gives speedy relief.

You are to note a further distinction from the effect, that some Scars are fair, others deformed. That we may avoid deformity, and make the Scar little and neat, we must make the Flesh equal to the Skin, or at least leave it to exceed, but very little; but here *smoothers* are proper, which correct the hardness, if too much; and sometimes mend the Matter after the Scar is made. So those things, that smooth or levigate, as Oyl of the Whites of Eggs, &c. and those, that abound in *volatile* or *nitrous Salt*, and those that do as it were rub it up again, and give it a new face, as *Pimpernel*, *Chickweed*, *Niter*, *Mustard*, &c. are convenient.

As

As to *Poroticks*, or those that generate *Callosity*, they are either *Internal* or *External*. These do not differ from *Vulneraries* spoken of before, nor doth any thing act to this end any other way, but so as we said before by absorbing, and rendring the Blood apt to consolidation. And so the *External* are of the same kind with *Epuloticks*, which act by binding, condensing, &c. and so they dispose the Aliment of the Bones to Callousness, or a glairy Substance fit for the purpose; as among the *Simples*, Meadow Sweet, Camphry, *Ostiocolla* (a stone exceeding good to conglutinate Bones, &c.) among the *Compounds*, the Plaister against Fractures, &c.

It is to be noted, that Bones do not unite, or at least not perfectly, but an intermediate Callousness comes between them.

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## BOOK I. SECT. II.

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### CHAP. XII.

#### *Of Medicaments against Burnings.*

**WE** shall not be less solicitous concerning these; their way of Acting, their Matter, their Use and way of Applying them.

*The*

## The Indicant

Is *Ambustion*, or burning of the Parts ; and 'tis various. 1. In respect of the *Matter*, as when 'tis done with hot Water , Gun-Powder, Oyl, Lead, or other fry things. 2. In respect of *Degrees*, as the *first*, which is only Heat or an Inflammation ; the *second*, when the burning is with Bladders and Pustles ; the *third*, either, when the Skin it self falls off, as by moist hot things, or is corrugated, and grows black, as by hot things that are not moist: the *fourth* ( which is incurable ) when the Part it self is so offended, that it must be taken off. Accordingly the Cure must vary, and choice is to be made of Medicaments. So more mild ones belong to the first degree, where only the Inflammation is to be taken away, and the Pustules hindered ; in the second and third degree the Parts are to be more carefully treated, as you may see more largely in Practical Authors.

In general the Medicaments against Burnings are of two kinds ; for they are either applyed *to take away the Empyreum* ( or fire as we call it ) as those things which are *of thin Parts*, and *hot themselves*, which at least in the beginning, or first degree of burnings do take place, such are Garlick, Onions, and their Juice, Salt, Camphire, Quick-lime, Myrrh, Oyl of Wax, &c. Thus a Woman in *Paracelsus* l. 10. p. 244. perswaded, that in the first place a raw Onion, with a little Salt beaten with it should be put to Parts burned with Oyl, so that next morning there was no Wheal or Pustule, but upon the whole Part which was not touched by the Oyl.

*Or to mitigate and assuage the Heat and Burning,*  
and consequently to heal the exulcerated Parts ;  
and

( and they are either *aqueous*, as the Water of all Flowers, of Roses, of Frogs-spawn, the Phlegm of Vitriol, Allom, Ink, which in like manner are to be used ( at least ) in the first degree; or *mucilaginous*, as Whites of Eggs, a Pultis of sweet Apples roasted, and squeezed through a strainer, the middle Bark of Elder, and of the Lime-tree, Cream, the mucilage of Fleawort-feed, and of Quince Kernels. So also Fern root, the Lees of Ale and Beer, the fat of a Pig dropped, and projected upon Bay-leaves, which cures ( as 'tis said ) like any Enchantment, or Lard dropped the same way upon Ice, which is also good in Chilblains and Chaps of the Skin. To this place appertains the excellent Oyntment against all Burnings done by any matter, described by *Dorcreilins dispens.* p. 105.

Or *Oily things*, especially the more temperate, that have no Acrimony in them; as Linefeed Oyl, the Oyl of Nuts, of Eggs, &c. ( see *Borellus* l. 50. c. 76. ) the external Balsom of Sulphur of *Rulandus*.

Or *absorbing and tempering terreous things*, as *saccharum Saturni*, ( or Sugar of Lead ) Quick-lime washed, or its Cream.

Or *mingled of these things*, which are the best of all; as Whites of Eggs beaten with Oyl of Olives or Linefeed Oyl, and spread over the place with a Feather, which is much praised, and deservedly. So the Oyntment of Litharge ( or *ung. nutritum* ) which is best of all; Plaisters of the juice of Herbs, Night-shade, Lime-tree, Elder, Henbane, &c. the Plaister of Frogs-spawn camphorated, *Diasaturni* of *Myns.* or Deer's fat, &c. Quick-lime washed made into an Oyntment with Oyl, the white Oyntment ( or *ung. alb. coctum* ) Oyntment of Ceruss, the Butter of *Saturnus Faber*, &c.

Note,



(III)

Note, 1. *That things actually cold are to be avoided*, because of their contrariety, for a greater Heat will follow, and the Flux and Pain will be increased. Hence all things are to be applyed luke-warm in these cases: hence also we may distinguish between cold things, and things that make cool.

2. *That things applied against Burnings must not be hard*, lest they cause a greater Pain.

3. *You may internally help to extinguish the Heat*, as Digby in his *Traët of sympathetick Powder*, doth highly commend Spirit of Salt, as an excellent thing.

4. *Sometimes the Part it self is to be respected*, tho you administer every thing else very rightly, as in Burnings of the Eye, you must have a proper Collyrium, lest the Sight be lost; of the Joynts, as of the Arm, &c. lest Motion be lost, &c.

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BOOK

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## BOOK I. SECT. III.

## CHAP. I.

*Of Medicaments that are appropriated to certain Parts.*

*Of Cephalicks.*

WE have elsewhere discussed the Question, *Whether there were any specifick Alteratives?* which we shall not repeat in this place. *Cephalicks* and particular Alteratives take their name from the Parts they are appropriated to, tho they do good to others; but they conduce more to some Parts than others; so that *Hippocrates l. de arte*, says that the way of all Diseases is the same, but their place makes a difference: nor doth it make any thing to the contrary, that all Parts are nourished by the Blood, for all Parts do not receive it alike; so that they are Cephalicks, as some would have it, that draw the force of the Medicament to the Head, but rather those that respect the Head, and strengthen its natural Heat.

Whence note, 1. That Alteratives and Confor-  
tatives

tatives are very often promiscuously named, altho one respects the Temper, the other the Action of the Part. 2. That this name doth chiefly belong to hot things, and very seldom to cold ones.

### *The Indicant*

Is chiefly the *Temper altered*, secundarily *Conformation*, as in the Dropke of the Head, Apoplexy, Palsie, &c. and also *Solution of Unity*, for 'tis certain also in this, that the Temper is vitiated, so that this alteration is taken in a large sense.

But seeing it is not sufficient to believe, that Cephalicks, and other Medicaments do act by an occult Propriety; or because of the peculiar similitude they have to the natural Heat of the respective Parts, we will somewhat more deeply enquire into their Vertues and force of Acting.

Therefore premising, 1. An universal distinction, (which holds good in all others) that some are *volatile*, some *fixed*, and some of a *middle nature*. 2. A general Rule, and Methodical, *that contraries are cured by contraries*. 3. That specifick Alteratives are properly and chiefly meant of Internal Medicaments; but sometimes also of Externals, as in Wounds; we will see what things Experience being witness do good in Cases, when the Head is affected.

Cephalicks therefore, that we may more strictly enquire into their Nature, do respect, 1. *The Membranes and Nerves*, and their irritation, tension and vellication, which are convenient in Head-aches, Epilepsies, Tremblings, and convulsive Motions; whether they be *discurients* or *demulcents* by their sulphureous balsamick Nature, as the *Paregoricks* (or Pain-allayers) *Germander*, *Ground-pine*, *Vet-*  
vain,

vain, Penny-royal, Betony, Flowers of Rosemary, of Spike, of Lime-tree, of Lilly of the Vallies, Castor, Amber, &c. or *inverters and absorbents* of Acrimony, as above all Cinnabarines: whence it appears, how these things are convenient in Epilepsies, Head-aches, Pains of the Joints, pleuritick Pains, and so in all Pains of the Body; hitherto appertain the most correct Opiates.

2. *The Humors*, chiefly the Lympha and Serum, and also the Spirits, Vapours and Exhalations, and that if they exceed in quantity, as *Evacuatives* and *Diversters* which have in them a volatile oily Sulphur, which are good in Catarrhs, Repletions, vertiginous Distempers, Night-mare, in some Epilepsies, when the Memory is weak, &c. as Piony, Wild-Time, Marjoram, &c. or are *deficient*, and then *restauratives*, *moisteners* and *diluters*, are the proper things; as inwardly aqueous Liquids, Potions, Decoctions, large Drinkings, which are necessary in Madnes, Melancholy, long Watchings, &c. or that the Humors, &c. are acrimonious, thin, salt, &c. then *fixers*, and *such as qualifie* the Humors, are proper.

3. *The Spirits*, which being *deficient* require oily, balsamical, volatile Restauratives, as Ambergreese, apoplectical Waters, the Balsom of Life, &c. Oyls destilled, as of Cinnamon, &c. which are good to preserve from the Apoplexy, to strengthen the Memory, and restore the Cataleptical, &c.

But being *enormous*, and *exceeding* furious and untameable, *moistners* and *restorers* of the Serum, and hinderers of Rarefaction, as *Acids*; promoters of Evaporations, as *nitrous things*; lockers up, or fixers, as Opiates; these are convenient in Furies, Phrensies, Madnes, and too much Watchings.

4. *Vapors*

4. *Vapors and exhalations*, which being excessive, forraign and extraneous, the Blood being infected with an unnatural Sulphur, and render'd more halituous, it makes the Spirits turbulent, as we see in drunken Men, which kind and strengthening Aromatics do correct, and these are commonly said to be good against Vapors, that rise up into the Head, and discuss them; as Coriander, digestive Powders, which cause good Chyle, and strengthen the Stomach; or *Acids* which obtund the bilious sulphureous Humors, as in Drunkenness.

But when they are deficient, humid things restore the roscid and gentle Vapors, hence it is, that in hot Fevers, Epithemes, (or Lotions) of Rose-water alone, Emulsions, and other cooling and moistening things are prescribed; so also those that generate an halituous Blood, as kind Aromatics; hence Senertus and Simon Paullus do advise, and Experience it self doth testifie, that for the over-watchings of old Men not Opiates alone nor Coolers, but these that kindly evaporate, and have much oily Sulphur in them are convenient; as *spec. diamb. diamosch.* wine it self, which we have known some to have used with great success; that the Serum may be consistent to it self, and have resolvable Sulphur in it, which will be more manifest from what follows.

5. *The Pores of the Brain*, either by opening those that are too close, or shutting those that are too open.

*Volatile things*, especially the Urinous, do open the Pores of the Brain, if because of the abundance of Humors, Subsidency or Compression they are any way closed or shut, and the Spirits have not a free Passage, as chiefly in the Palsie, Apoplexy, Speechlessness, thick Catarrhs where the Openers

of the Pores, are the only beneficial things, as also in all sleepey Diseases, Lethargy, and such like; Thus with Spirit of Sal Armoniack, with Spirit of Lilly of the Vallies, we have cured several Palsies; you must sometimes add Discutients.

But they *shut the Pores*, which increase the *Serum*, or afford a gentle resoluble Sulphur, and these are good in too much Watchings, Madnes, Phren-sies, and other furies of the Spirits, as to

### *Their Matter.*

Seeing in general they are to restore the natural Heat, or else to temper it, we will contain them under the titles of Volatiles fixed, and mixt.

*The volatile Cephalicks* are, 1. *Those things, that have an oily, aromatick, pleasant Sulphur*, or in one word *Balsamicks*. The leaves and roots of Angelica, Clove-gilly-flowers, the Leaves of Rosemary, Marjoram, Sage, Rue, &c. Sassafras-wood, &c. and the Spirits of these, their Oyls, and oily volatile Salts; and these are Pain-allayers, and please the irritated Membranes, restore the deficient Spirits, correct Vapors, and dilate the Pores. 2. *Urinous volatile*, as the most excellent Spirit of Sal Armoniack, Spirit of Urine, &c. whence the Tinctures of Gold and Silver do almost solely borrow their vertue. 3. *Volatile Acids*, as the streaky Spirit of Vitriol, the Apoplectick Water that Women use, &c. altho these are, as it were, more fixed.

*Helmontius* did first note, that Cephalicks commend themselves by a volatile Salt. Conserves, Confections of vegetables, &c. belong to this place.

*Fixed*

*Fixed, as the terreous, as Pearl, Coral, Cinnabar, or of the Compound pulv. Epilept. Marchionis, specifcum cephalicum Michaelis, that is, the specifick cephalick of Michael; or Acid, or Nitrous, or diluting and aqueous, and these have their use to absorb and dilute acrimonious Humors, ease irritated Membranes, to bind furious Spirits, to lay them a sleep, and tame them; and to give liberty to the Pores, by destroying Acidity.*

*Middle between both, and these are various.*

*External, and then they are either Moisteners, and restorers of the Serum, as in Melancholy, where we use a Decoction of the Leaves of Lettuce; or of thin Parts and penetrating; or cold and repelling; as in Hemorrhages, Phrensies, where Acids also profit, &c. or Discutients and Evacuatives; as Sternutatories, Apophlegmatisms, &c. or Anodynes, as the Oyntment of Alabaster, Populeon, or strengtheners, as lixivium sapientia, Oyl of Peach, &c. see B. Rolf. O. & M. Comment.*

Therefore seeing the Head is the chief Part, we must take great care concerning it, and the right method of applying things to it.

### *The way of Applying them.*

As to this you must note

1. *That violent Alteratives, and those that leave a Hurt behind them, are either to be omitted, or used very sparingly. So*

*Things too odoriferous do trouble the Head, especially when the Head is affected with Vapors, so Styrax, Saffron, and Myrrh it self, and unprepared Coriander, do offend the Brain, and consequently all vaporous things, that have an odd kind of Sulphur, do easily molest the Spirits and shut the*

Pores, yet they are warily to be used ; so that Opiates appertain to these, which being unwarily given do often, especially in Children, weaken the Head, and make it muddy, and to these belong the shadow of the Walnut-tree, the Yew-tree, and the Oak, &c.

*So things too cold are to be avoided ; as frontal Repellents and Lotions, which the Brain indeed bears very well, but you must take care, that you do not spoil the Tone of it, seeing all cold things are enemies to the Nerves.*

*So to heat or dry too much is never safe, for thus the Spirits are made furious, the Pores dilated, which they must observe most of all, that labour to gain a Memory by the use of the Anacardine Confection, and other hot things, as Hofman reports some to have run mad by this means ; for in excess that Verse of Horace is very true.*

*Stulti, dum vivunt vitia, in contraria currunt.*

But comparatively you can err less in Heaters than Coolers.

Thus *Heurnius* cautions, that we should sparingly use manifest Astringents, ( especially in Topicks ) but some warm things must be added, that others may penetrate the better.

You must therefore alter, but with Mediocrity, and the temper of the Brain is to be preserved, as will more fully appear from what follows.

2. *Where the Brain is full of moisture, neither Moistners, nor Melters, nor those that are hot things are to be used in Catarrhs. Hence Lotions of the Head, and Baths are to be shunned ; for some have lost their smelling by those means. So those, that internally or externally to the side of the Head in Catarrhs do use hot things, as Oyl of Amber, do often*



often, as it were, melt the Matter, and cause Feavers, and other grievous Symptoms.

3. *Salt things whether alkaline, nitrous or acid are not convenient in Catarrhs*, for they make the Serum more fluid, so that it may affect the noble Parts, which is true also of other Parts.

4. *The Topicks, that are for the Nerves, are to be applied to the Back-bones*: for the Nerves take their original from the Marrow of the Back-bone, which chiefly holds true in Palsies, Epilepsies, &c. therefore many do err, that apply them to the Part affected, when they belong properly to the Nerves, of which Galen doth somewhere give an elegant example.

5. *Acids are convenient where the Pores are too much filled, or the Spirits and Humors be furious and out of order*, as in sleepy Distempers, in Madness, &c. but are not so where the Nerves and Membranes are amiss, as in the Palsie; and so in great Watchings they are to be avoided.

6. These (as all other Specificks) are more convenient, and especially proper, when the Head is of it self essentially affected, but less proper when the Head is affected by consent. For the rule doth not hold absolutely; the Head is affected, therefore Cephalicks are to be given, or the Stomach is affected, therefore stomachicalls are to be used.

7. *Vegetables have more the title of Specificks, and chiefly the hot ones; and Minerals are accounted more universal.*

8. *As there is a great consent of the Head, Stomach and Womb: so in Distempers of any of them you must have respect to the other: and hence also it is, that Cephalicks are Uterines, and warm Stomachicks are Cephalicks, for the most part.*

BOOK

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 BOOK I. SECT. III.
 

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## CHAP. II.

## Of Ophthalmicks.

**A**S to their way of acting they respect either the Eye it self, either as to the *tunica adnata*, as when 'tis inflamed and blood-shot, or the *cornea*, as not admitting the visible Species, being obfuscated, exulcerated, wounded, &c. such are *Repellents* common with those above-named, or *Abstergents*, either somewhat biting, as fats, of which the fat of Vipers excels, Rue, white Vitriol, &c. or *aqueous*, as destilled Waters; or *terreous*, as prepared Pearl, Irish Slate prepared, the Magistery of the Sugar of Lead, &c. which besides in the blood-shot, are good in Pustules and Excrescencies, against things that grow to, or over the Eye, Ulcers, &c.

Or they respect the *Humor*, impure Vapors and Exhalations, as well internally as externally, such are *discutiens*, and those either *internal*, which agree with these we shall speak of hereafter, and most Cephalicks are of this kind; or *external*, from an inward Cause, as in a suffusion, weakness of the Sight, &c. or from an external Cause, as a blood-shot, &c.

Or

Or restore them being deficient. So *Burrhus* doth with great pomp extol *Celandine* water to that purpose, *Kerkringius* doth also boast of a great *Arcanum* to the same end. *Heerius* in his observations, hath an instance to this purpose, of the juice of the Bladders of Elm, presently dropped into a wounded Eye. They conduce also in Scars, Films; Ulcers, narrowness of the Pupil, depravations of the Sight, &c.

Or lastly the *Spirits and Nerves*, as well those, that pen, and unlock them, as those that comfort and restore them; internal and external, which are of use in the Disease called *gutta serena*, in weakness of the Sight from Contusions, Blows, and an intrinsic Fault; or if the motion of the Eye be hurt, as in Palsies, &c. and these scarce differ from Cephalicks but are the same, especially those, that are of tenuous Parts and volatile; as the volatile Salt of *Vipers*, the internal use of which *Severinus* doth much commend; the rest, as *Astringents*, *Vulneraries*, &c. are the same with others, and to be referred hither. Vesicatories are also common Revulsiores, which are very efficacious in Distempers of the Eyes.

### *As to the way of using them, and Cautions:*

You must note, that the Eyes are not to be cured without the Head, nor the Head without the whole Body. For it is impossible, if the whole be out of Order, that any Part should be well; Thus in cases of the Eyes, Purgers among other things are convenient, especially where the Humors are peccant, and betake themselves to the Eyes.

2. *Repellents* have place, mostly when the Head is purged, especially in the more grievous Inflammations of the Eye.

3. *Avoid*

3. *Avoid suppurating things in Distempers of the Eyes,* therefore Emollients are not promiscuously to be used, especially in an Ophthalmie, which I have known to come to suppuration in a certain Baker.

4. *Opiates are to be used very warily,* not with that superstition which the Ancients had, that they would take away the sense of the Part; but because they hurt by their Acrimony, nor do they ease the Pain, but put the Spirits to flight.

5. *The Eyes will bear things somewhat acrimonious.* So Platerus observes that one used Sublimate instead of Sugar without any hurt. And I have known the Spirit of Vitriol dropped into the Eye; by a mistake without any harm done, besides the present and flying Pain.

6. *The Eyes delight in mucilaginous things, but not in clammy;* for these cause Pain, but the other being conformable to the temperament do please, defend, alter, and give ease.

7. *Sneezers are to be avoided in Cases of the Eyes,* lest they cause a greater Flux.

## BOOK I. SECT. II.

## CHAP. III.

*Of Oticks (or Ear-Medicaments.)*

**T**hey are otherwise called *corroboratives* of the hearing, and they respect,

Either *the Ways and Passages*, as the ordinary Cavities obstructed, that the Sound cannot be admitted, and these are Vices of Conformation: those things, that help (besides Chirurgery and manual Operation with Instruments) are *cleansers, easers* and *openers*; as of Niter, the Galls of living Creatures, Oyls of bitter Almonds, Juice of Onions, &c. and things made up of these, as Fumigations, and other things of tenuious Parts: which is also to be observed in the Cases we shall speak of, that the way may be free, and the external Air may pass without Impediment.

Or *the sense it self*, which the *Nerve* of the fifth Conjugation, and the *tympane* where the Air is reverberated, and gives the sound, which is perceived by the benefit of the Nerves; such are *corroborating* Cephalicks increasing and vigorizing the Spirits, and opening the Pores, and they are *internal*  
and

and *external*, as Rosemary, Bays, &c. which need not be repeated here; they profit much in hardness of hearing, and dulness of hearing, and in the beginning of deafness it self.

Or the *Humors*, that flow to the Ears, whether they vellicate the membranous Parts by their *Acrimony*, and so produce great Pains, and then kind *Paregoricks* (or pain-easers) are of use, as flowers of Chamomil, of Peaches, a fomentation of Milk, &c. or *are corrupted*, burned, purulent, or to a base ichoreous Matter or bloody, and come forth now and then; and then gentle *dryers* are proper; for as by the example, of a musical Instrument the moister sounds worst; so doth the Tympane when 'tis over-moist or relaxed; therefore we must by all means study to preserve the Tone of so delicate a Part: and *detergents* to which also appertain *anthelminticks* (or worm-killers) especially the *bitter*, which give ease also in the pain of the Ear, in Purulencies and noises of the Ears.

And sometimes the Humors *are critically thrust into the Ears*, and stagnate there, and hurt the hearing, which happen in several Cases, and in the declination of malignant Fevers, which is a good sign, which precipitants chiefly of Cinnabar doth help, tho generally it wears off by degrees of it self.

Or *extraneous Vapors* tainting the innate Air, and infesting the Tympan with a strange motion. Then Discutients, or such as alter the Distemper, or take away the Vapors are good, they made be up of Carminatives, that are cephalical and balsamick, and are good in all odd sounds of the Ear, as hissing, tinckling, &c.

The

*The Matter*

Of them, and the select too, is set down by *Me- bins* and *Rolfincius*, both as to externals and internals.

*As to the way of Applying them.*

You are to observe the following Rules,

1. *In all symptoms of the hearing* (especially tinckling and hardness of hearing) *the Head is to be strengthened*; for the Ears are emunctories by which Nature empties its dregs, tho sometimes to its inconvenience.

2. *You must not rashly give Sternutatories, especially the stronger sort*, for the gentle do move, not thrust forcibly; the strong do manifestly hurt the Eyes, and after sneezing we may observe a sad sensation in the Ears, and so they hinder the force of *Oticks*.

3. *All Topicks are to be put in luke-warm*, for both the very hot, and the very cold are hurtful to this tender and bare un fleshy Part.

4. *Before you use any Topicks cleanse the Ear very well from its filth*, that they may pass freely, and that their vertue may not be obtunded by that vis- cious filth.

5. *Three or four drops of Liquids are enough for an external Dose*, for 'tis not convenient to overwhelm this narrow gate or passage, nor are aque- ous things so convenient; but are more advisedly applied in *Fomentations mediately*, and *Oyls*, and *spirituous things immediately*, and *Balsamicks* both ways, as *Musk, &c.* which are good also in fu- migations.

6. *After*

6. *After Externals are applied, let the Patient lye on the opposite side, that they may penetrate the better, and the Medicaments fall lower.*

7. *Very unctuous and viscid things are not rashly to be put into the Ears. Therefore rancid Oyls, and thick ones are excluded, yea etherous Oyls, Fats, Balsoms, Liniments, much more Plaisters are inconvenient, because they shut up the Passage, and hinder the admission of the Sound; so that Galls are better in Essences than Substance, so Balsom of Peru, Zivet, &c. are to be omitted.*

8. *Very eager and acrimonious things are never to be instilled into the Ears, for the thin Cuticle is hurt by them, whence Pain and Inflammations and many other Inconveniencies do arise. This holds chiefly in distilled Oyls, of which observe the difference,*  
 1. *Some may be put in in few Drops, if especially the force be weakened, as carminative Oyls with Oyl of bitter Almonds.* 2. *Some taken into Coston may be put in, as Oyl of Aniseed, &c.* 3. *Some are altogether to be shun'd, or to be mingled very sparingly with other things, as Oyl of Amber, Juniper, and other very hot Oyls. We have known violent Pains to have followed both those Oyls.*

9. *Masticatories in the use of Oticks are not to be neglected; so the Auditory Passage which runs from the Ear to the Mouth shall be more opened, so that we bid them at the same time masticate Mastick, or Cubebs, which of themselves also open the Pores of the Head and Brain.*

The most usual (as we said) among Topicks are,  
 1. *Oyls mingled, where the basis is Oyl of bitter Almonds.* 2. *Fomentations, as well dry ones of Bags and Suffiments, &c. conveyed to the Ears by Tunnels; as moist, of hot Bread with Carminative seed, &c. baked and slit in the middle: or deco-*  
 ctions



tions of Cephalicks, to which are very conveniently added Purgatives, as Asarabacca, Hellebore, Coliquintida, &c. which increase the force and energy of the rest.

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## BOOK. I. SECT. III.

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### CHAP. IV.

#### *Of Pectorals.*

THESE above all have got many Names, they are called *Bechicks*, because they cure a Cough. *Pneumonicks*, because good for the Lungs, *Expectoratives*, *Arteriacks*, *Anacatharticks*, and by other Names.

They respect either *the ways* necessary to immit, and emit the Air, which ways they clear and free from all stuff that gathers in them; such are *cutting things* and *attenuaters* of the Matter by *simple volatile Salt*, as Wake-robin, Hedg-mustard, and the Syrup thereof; or *such as have an oleo-balsamick Nature*, as honey, which are good in gross Humors, and where they are viscid, clammy and phlegmatick, in an Asthma, in doubtful Coughs; or *smoothers or supplers*, as Lohochs, pectoral Syrups, &c. which are chiefly of use in a hoarsness, and generally in Coughs. Or

Of the *Humors*, either being *thick*, and so cutters and detergents are good; or *thin*, *acrimonious* or *salt*; and then the *terreous* and *mucilaginous*, *Opiates*, *Bole-Armenack*, *Mastich*, *Frankincense*, *Treacle*, &c. are convenient, or when they *decline to Putrilage or Ulcers*, then *resisters of Putrefaction*, *Balsamicks*, *terreous things*, *precipitatives* (not omitting the *smoothers* or *supplers*) and if occasion be, *Vulneraries*, and things that *consolidate* have place.

Or *expansion hindered*, and that as in other cases so chiefly in *Inflammation* and *Abscesses*, in which case besides *Universals*, *Diaphoreticks* to reduce the *Blood to order*, *resolvers and dissolvers of Coagulation*, as most *Antipleuriticks*, especially the *Antimonial*, are of use. These sometimes show Nature another way, which is commonly by *Expectoration* or *Stool*.

But in all these *Expectoration* is not to be neglected, but in all cases those things that promote it are commended.

### The Matter of Pectorals.

They are, 1. Either *piercing and biting Volatiles*, that have much *volatile Salt*, as *Wake-robin* and its root, *Squills*, *Mustard*, *Hedg-mustard*; or *bitter*. 2. Those, that have a kind *volatile* or *oily Sulphur*; as *Iris-root*, *Fennel-root*, *Elycampane-root*, *Sundew*, *Aniseed*, *Sassafras*, *Amber*, *Benjamin*, *destilled Oyls*, &c. 3. *Sweet things and dewy Mucilages*, as *Sugar-Candy*, *Syrups*, *Lambatives* of all kinds, *Honey*, *Liquorice*; which two Classes mostly concern the business in hand. 4. *Resolvents*, and partly *gentle dryers*, partly promoting *Expectoration*, as *Crabs-eyes*, *Sperma-ceti*, a *Bores-tooth*,

tooth, Antimonium diaphoreticum, Gum-Ammoniack, Amber, Asthmatical Waters, Chervil, &c. 5. *Terreous, precipitants, absorbents and consolidants*, as Coltsfoot, Scabious, Speedwel, Antimonium diaphoreticum, and *Poserius's Anti-hectical*. 6. *Mucilaginous things, that are temperate*, as Marshmallows, Jujubs, Sebestens, Gum-Arabick, Gum-Dragon (or tragacanth,) Bole-Armenack, &c. The rest, as 7. *The aqueous diluting things*, and 8. *Astringents*, are plain from what has been said before, and some of them are common, &c. 9. *Opimates*, as Diacodium, &c.

The former may come under cutting things, the latter under Incrassatives; and the aqueous are of a middle nature.

### *The Way of Applying them.*

As to this you are to use them rightly both inwardly and outwardly,

1. *In cases of the Lungs, the order of Pectorals, as of thickeners and cutters, is not to be confounded or inverted*, that is, you must not give thickeners where the Humors are viscid, clammy or plegmatick, nor cutting things, and attenuatives where they are thin, salt and acrimonious. So also

2. *Bechicks are not to be confounded with resolvents, but may be mingled as occasion serves*, as in a Pleurisie and Asthma resolvents, in a Cough and Consumption Bechicals are more convenient. But he that will presume to cure the Pleurisie with only Bechicals, as with Lambatives, &c. shall kill the Patient; and so they are dangerous in the asthmatical.

3. *In cases of the Breast you must not bind without resolvents*. 1. That you may have respect to the

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gramious

grumous Blood, as in Spitting of Blood, where Crabs-eyes doth the business, altho taken, but in a small Dose; both Corals, Bole-Armenack and Terra sigillata do the same, &c. 2. That the tone of the Lungs which naturally should be lax, and soft may be regarded, least their expansion should be hindered.

4. *Great dryers are to be avoided, or mingled with moisteners*, as Antimonium diaphoreticum, Poterius his Anti-hectical, as also Sulphurs themselves, as the Common, Flower of Brimstone, and the pure Sulphur of Antimony, &c. Hence the fresh and green pectoral Plants where you would moisten and cleanse as in a Consumption, and the dry, when you would consolidate, as when a Vein is broken; are most convenient.

5. *Those that too much relax are to be avoided as well internally as externally*, for they weaken the Tone of the Stomach, and cause a dejection of the Appetite, therefore 'tis not convenient to use them over-much in bechical Lambatives; for these by enlarging and dilating the Pores make a greater capacity of receiving the Afflux of Humors, therefore you must also use caution in pectoral Ointments.

6. *Bechicals are to be taken by little and little*, that some may slip into the Wind-pipe, whose roughness we are to cure: this holds true in Powders sweetened with Sugar candied, in Lambatives and Electuaries.

7. *Cold things are enemies to the Breast*; therefore all moist things are to be given warm; and externally, tho you design astringency, they are not convenient, because they destroy the Tone of the Part, which delights in warm things; and 'tis observed, that Coughs are caused by Cold alone.

BOOK.

## BOOK I. SECT. III.

## CHAP. V.

*Of Cardiacks, or Cordial things.*

**T**He name of *Heart-comforters*, which are called *Cardiacks*, *Cordials*, and, according to *Willis*, *Vitals*, is a very specious name; hence they are by eminence called *Comforters*, as if they were principally such.

Seeing therefore, that *Cordials* are such which help a labouring heart, let us note. 1. That the *Heart and Blood are fellow Causes*, not are they to be disjoyned, as some do, therefore *Willis* deserves a Censure, for saying that the heart is not such a Noble; and principal Part as it is made to be, but a mere Muscle, consisting as others do of *Flesh and Tendons*, and serving to impel the Blood.

These certainly seem to take a dead Heart for a living one, it suffices, that the Heart is the radical seat of the Soul, and that, as elsewhere, so here it is to be taken in the Concrete, so that what *Willis* says doth fall to the ground, when he asserts, that *Cordials* affect the Heart no more, than they do the Hands or Feet, or any other Part, that is muscular; he otherwise doth elegantly discourse of

their way of acting; and well deserves your reading.

2. *That the Blood consists of two Parts the Hot (which is the principal) and the moist Part or serum, in which two alimentary Humors all our health and life consists, nor is there any other natural Heat or radical Moisture besides these furnished with Vigor and vital Ferment.*

3. *We say, that Cordials are such as produce Blood and Heat, and dispense them, and which dispose the consistency of the serum, and the motion and vigor of both; and that the Heart is the fountain of blood and heat. Therefore*

### *The Matter*

Of them is. 1. *Either rarefiers of the Blood, when its flame seems to be deficient and weak, when the sulphureous and volatile, the mercurial, and spirituous Particles are either obtunded or deficient in quantity; such things are good in faintings, languishings, lassitude, malignity, old-age, paleness, coldness, cachexies, in the paroxysms of intermitting Feavers, in weakness, anxieties, when the motion of the Blood doth, as it were, fail, therefore much used in malignant Feavers, and to send out the Small-Pox and Measles, &c. and such are Volatiles.*

2. *Sulphureous, and those either spirituous, as Rose-water, Spirit of Roses, apoplethical Spirits, Quintessences, Wine, Spirit of Wine, &c.*

Or *oily*, which abound in a delicate fine Sulphur oily and volatile, in one word, they are *balsamicks*, as Cinnamon, Camphire, Myrrh, and all odoriferous things, which have an immediate commerce with the Spirits, as *Helmont* says, such are Cardamoms,

moms, Oyl of Cinnamon, Musk, Amber-greese, the Essences and Tinctures of such, &c. Treacle also, and Mithridate, &c.

2. *Lixivial salines*, as Salt of Worm-wood, of Scordium, of Card. Bened. &c. which precipitate, and have a mighty energy to rarefie the Blood, and reduce it to order; hence they are excellent Febrifuges and Sudorificks.

Or *urinous Volatiles and Salines*, which are the most powerful, as Spirit of Harts-horn, of Sal-Armoniack, of Soot, of Vipers, of Harts-blood, of Man's-blood, of Ivory, or these mixt with the oyle, as oyle volatile Salts, which are above all.

Hither also appertain *ferid things*, as well sulphureous, as urinous, which are good in Syncopes, Hystericks, &c.

Note, the rarefaction of the Blood denotes two things. 1. The restoring of the deficient Spirits, which the Balsamick and Sulphureous do chiefly perform, 2. The motion and fluxibility, which Alterers of the *serum* do chiefly perform, and such are saline things.

II. Or *hinderers of rarefaction*, which depress, obtund and precipitate the sulphureous, balsamical, mercurial and volatile Particles when they are outrageous. And they are

Either *aqueous*, which dilute and restore the *serum*, the defect of which makes the rarefaction greater, as temperate cordial Waters, of Endive, Sorrel, the cold Cordial of Herc. Saxon. Whey, &c. which enervate the dispersing Volatiles. From which it appears that Julaps and liberal Drinkings are to be allowed in Feavers, nor are the sick to be kept so strictly to thirst.



Or *acids*, which among these are chief, therefore let it be a Rule, *Acids obviat Sulphur*. Such are Citron Juice, Pomegranates, Sorrel, Wood-sorrel, Acid mineral Spirits, as of salt Vitriol, the Clyster of Antimony sulphurated, the Phlegm of Vitriol, and things prepared of these, as the Tincture of Violets, Roses, of the four Cordial-flowers, &c.

Or *nitram*, which also check the Sulphur, and weaken it, promote its exhalation, do finely temper it, strengthen the *serum*, and restore it to itself; as Sal prunelle, Niter antimoniated and perlated, &c.

Or *terreous, absorbents and precipitants*, as Coral, Pearl, the five precious Stones, Bezoar, Shells, Unicorn's-horn, &c.

And these hold place in all manner of Fevers and bilious ebullitions of the Blood (for 'tis Cholera that doth most of all rarefie the Blood;) hence they are very good in Distempers from anger, in madness, Phreulies, the burning Hungarian Fever, &c.

III. Or they respect the consistence of the Blood, and such are hinderers of resolution, and preservers of the *feeling systasis* or texture.

Whether they do it by *concentrating the Sulphur*, as *acids*, which are therefore the best things externally used in resolution of the Spirits, and are good in Syncope, Lipothymies, Faintings, Colliquative Sweats, Ichorous Blood, &c. and such are those above-named, but chiefly plain Vinegar and Vinegar of Rue, the Bezoardick, and Vinegar of Raspberries, &c. so also cold things actually such, are good externally, as Water, Rose-water, &c.

Or by *tempering the serum*, as *aqueous things*, chiefly *Emulsions*, which have something of Mucilage with



with them, therefore the use of these in malignant Fevers, especially where there are great Watchings, and a Phrensie, or delirium is most noble.

Or by confirming and tightly concentrating and joining together the Blood and the Serum; as the mucilaginous and terrecous Astringents, and temperate Balsamicks, as Harts-horn philosophically prepared, Ivory prepared without fire, gelly of Harts-horn, the bone of a Stags-heart, Bale-Armenack, *terra sigillata*, flowers of Pomegranate, and of the hot Cinnamon and Vitriol of Mars, which also have a terrecous quality.

To these appertain opiates also, for 'tis found by the experience of Practitioners, that *Laudanum opiatum* is very convenient in a resolution of the Spirits and the Blood, but in a small Dose; and thus a further dissolution of the Spirits is hindered. Therefore our *absorbing Powder*, which is described in our *tract of opium*, is most commendable, adding a drop or two of Oyl of Cloves; we have seen admirable effects of it in synoptical Cases, Paintings and Hystericks, &c. of which we have spoken more largely elsewhere. These Opiates may be mingled either with *spirituans restoratives*, as *Confectio alkermes*, &c. that this way also the dissolution may be hindered, and supply given to the Spirits, or else with *terreous absorbents and resolvers*, that this way also the consistence of the Blood may be regarded.

IV. Or they are *resolvents*, which take away the grossness, and coagulation of the Blood, which they expedite, resolve and dissipate and hinder the rawness of the serum, so that some by removing Impediments do remotely help rarefaction. And they are either *balsamicks* or *resisters of Putrefaction*,

*aqueous diluters*, and especially *terreous* things, which are also good after Falls, in Pleurifies, &c. as Corals, Crabs-eyes, Antimonium diaphoreticum, and others spoken of before. Next *acids* are good, for Acids (as we have said before) behave themselves in a middle way, they coagulate resolved Blood, and resolve coagulated Blood. For the Blood grows grumous from both Causes, that is, too much resolution, and too much coagulation. Here note, that *Acids mixed with Bezoardicks do improve the Bezoardick, and sudorifick vertue by their penetration*; As in the simple mixture, where neither the theriacal Spirit, nor the Spirit of Tartar do so much cause sweat, much less the Spirit of Vitriol, but joyned together they do it excellently well. Hither you may refer what is said of the first class of rarefiers. These are also good in palpitation of the heart, faintings, malignant fevers, &c.

And those which do these things in an eminent manner, which defend and preserve the frame, and texture of the Blood and Spirits; that the Blood may not decline to a state of fusion, resolution, ichoroufness or coagulation, are properly called *Bezoardicks*, of which we shall speak more hereafter; that all *Diaphoreticks* perform, especially *Alexipharmicks*.

Nor is it any thing, that these, especially the temperate, are not immediately carried to the heart, 'tis enough, that they soon operate upon the Blood, and change its frame, and then their Energy, and effect results to the Heart, yea such Cordials do often take away the antecedent Cause, but the Heart receives the benefit in the end, as to

*The right way of administering and applying them,*

You

You are to note,  
 1. That no excessive alteration of either side is convenient for the heart, therefore beware of too much cooling or heating, for that hinders the motion of the Spirits, and this dissipates them.

2. Where there is weakness you must not presently run upon Cordials, and only them: but the Causes are to be removed, whether it be fulness of Blood that chokes up the Spirits, or a cacochymie that infects them; so that it has often happened, that blood-letting or purging has done the business, and the contrary is a vulgar error.

3. Let all volatiles be used with mediocrity in dieticks and pharmaceuticks, and that in the Sulphureous and urinous. Thus it is, that those, that use Wine and Brandy, in their youth lose the strength of their Stomach in their Age, because the older they grow the hotter things they require; thus things camphorated, and destilled Oyls do often hurt. Hence

4. We must never rarefie, but we must at the same time regard the consistence of the Blood to keep it in its natural state, nor must resolve so, as not to regard the tone, and due rarefaction of the Blood. Hence they err, who wear out their patients in malignant Fevers with volatiles, and perpetual Sweats, when they ought indeed to discuss, and preserve rarefaction, but to moderate it when too great. Thus those that unwarily use resolvents, make the tone of the Blood too loose, that the Spirits are dissipated and vanish away, which you must note, in a special manner of Cinnabarines, for they are the greatest resolvents; but having premised Universals you must interpose Tonicks and gentle Astringents.

5. *Penetrating things are cordial*, both internally and externally, they restore the Spirits, and hinder Grumescenty; therefore Vinegar and Camphire, &c. are used in the external Medicines.

6. *Cordial Comforters are to be well distinguished*: so that where the serum is deficient, scarce any things are proper, but the actually humid, the aqueous, not omitting Acids or nitrous things; and for on the contrary, least we should give one for another, and confound things.

7. *We must not use mustie things too much*, for they most of all rarefie the Blood, and will, while they over exalt the mercurial Particles, instead of comforting Nature, hurt it; and they generally profit more externally than internally; or at least not but in due time. They have their use, if rightly administrated.

8. *We must not use mustie things too much*, for they most of all rarefie the Blood, and will, while they over exalt the mercurial Particles, instead of comforting Nature, hurt it; and they generally profit more externally than internally; or at least not but in due time. They have their use, if rightly administrated.

BOOK

have been the Apocrypha much raised by the use of  
my Tobaccum, which has the two last powers!

2. Those that have a volatile Salt (that is oil), &c.  
Specially as Pepper, Mustard, Ginger, &c.  
Spirit of Wine, Aline, Juniper, Citron-Bark, and  
many others, out of which compounded together

Stomachical Essences and Elixirs are made.  
3. Other things, as Wormwood, Aloes, Elixir pro-

6. Camomile, Anise seed, Fennel seed and  
Caraway seeds, &c.  
7. Some Elixirs, as Cinna-mo, Mallick, Co-

8. Quinces, &c.  
9. Various and Capers, &c.  
10. Considered for their use as we have of

11. The Heart, and such generally  
are such as have an oleous, volatile, aromatick Sul-

phur; and these comprehend under them,  
1. Aromaticks, as such as are called so by eminence,

as Cardamoms, Cubebs, Mace, Nutmeg; and many  
others among Roots, Plants and Barks, as the root

of Burnet, Cinnamon, Mint, &c.  
2. The oily balsamicks, as Ambergreese, Balsam

of Peru, &c. for these have a balsamick Acrimony,  
and are therefore commended by *Riverius* in Vomi-

tings, want of Appetite, and other Vices of the  
Stomach, so Oils, etherically aromatick, as of Cin-

namon, Cloves, Pepper, &c. Hence it is, that I  
have

have

have

have

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have seen the Appetite much raised by the use of my febrifugum, which has the two last powerful Oyls in it.

3. *Those that have a volatile Salt (that is oily, ) especially, as Pepper, Mustard, Ginger, &c.*

4. *Spirituons, as Wine, Rhenish, Malaga, Alecant, Spirit of Wine, Mint, Juniper, Citrons-Bark, and many others, out of which compounded together stomachical Essences and Elixirs are made.*

5. *Bitter things, as Wormwood, Aloes, Elixir propriatis, &c.*

6. *Carminatives, as Anise seed, Fennel-seed and Caraway-seeds, &c.*

7. *Gentle Astringents, as Cinramon, Mastick, Coriander, Quinces, and digestive Powders.*

3. *Nervines and Cephalicks, as Caster, Morehound, Coriander, &c. for great (as we have often said) is the content of the Stomach and the Brain.*

And these are good in loss or defection of Appetite, when the chylickation is depraved, in belchings, hicoughs, heavy-heartedness, (where chiefly Oyl of Cloves, and carminatives do succeed) wind, a sympathetick Vertigo, and other Symptoms arising from coldness.

The very same almost do correct excessive heat, and also a faulty Ferment; of which we shall speak by and by.

II. Or they respect the ferment, which we generally call the Menstruum of the Stomach: tho many, that I named before, do fall in with these, because they have a saline Acrimony, yet you may note this, that the more Sulphureous they are, the more they respect Heat, as the oily balsamicks, &c. the more saline the Ferment; for some have heat enough, but a faulty Ferment; but generally speaking

speaking both must be regarded. Therefore we must not by strengthening the Heat destroy the Ferment; which is mostly done by the spirituous, as Spirit of Wine, Brandy, &c.

They whet the Ferment, which have either an acid or a volatile Salt but especially the last, as

1. *All acrimonious things*, as common Salt which is not only good for the taste sake, but also to quicken the Ferment; so all peppery things which we mentioned before, antiscorbutick Plants, Wake-robin root, Sawces, Pickles, *Italian Mustard*, &c. These correct an acid Crudity, and attenuate viscid Humors.

2. *Acids*, as Vinegar, which help the Stomach both inwardly and outwardly in Fomentations, but moderately used: so acid Spirits of Salt, Vitriol, and of Venus, which is called the hungry Vinegar. Some take Pills of Leaven to help the Ferment, and 'tis good; these correct Phlegm, and foul hot Belchings.

3. To this place may be referred the *Coats of the Stomach or Gizzard of a Hen, Heron, &c.* which are commended to strengthen the Stomack, and the Ferment, but you must not overmuch trust them, as *Galen* himself affirms; for they do good by accident, as we shall declare by and by, as they absorb the bilious Humors, that pervert the Ferment.

These I say add force to the Menstruum, that it may dissolve, and concoct the Meat. We may reckon up more, but that in the Class of Salines they are mentioned, and 'tis needless to make repetitions.

With these we restore the Appetite, take away Crudities, and the hinderances of Chylification.

Note,



Note, That 'tis exceeding convenient so to dispose Stomachicals, that they have respect to the Heat and Ferment, by mingling both together; thus the sweet Spirit of Salt, Myndichs Elixir Vitrioli, Elixir proprietatis, with the Spirit of Sulphur are very good.

If the Ferment doth exceed either in saline or bilious Acrimony, in which the hot distemperature doth consist, then *it is corrected*.

1. By obviating it, 1. With fat things, which Authors commend in a canine Appetite and Bulimie; by diluting. 2. With aqueous things, by inverting and absorbing, as 3. Lixivials. 4. Terreous precipitants, which are Alkalines, as Crabs-eyes, Ivory, Shells, and testaceous things.

Here note, that these may by accident, by reducing the Acid into order, cause an improvement of the Appetite, either alone or mixed with Aromatics, as you have an example in the Powder called *tragea stomachica*, either of *Quercitan* or *Bircman*. Thus we have observed precipitating Powders, as of Shells with some natural Cinnabar, or our absorbing Powder, to have notably excited the Appetite with great relief.

You must note, the proportion of the excess of acidity in the Stomach, for the Ferment is not right, when the Acid exceeds; and mark the continuation of Custom. For all Lixivials and Alkalines destroy the Appetite of themselves, and weaken the Ferment, so that the Oyl of Tartar by deliquium is no contemptible Arcanum in a Bulimie, or canine Appetite.

2. These pervert the Ferment. 1. Sweet things, which intangle the saline Acrimony by their Mucilage, especially if too much used. 2. Acid-salines, as *arcantum tartari*, altho otherwise an excellent



lent Medicine, with often use defects the Appetite. 3. *All nitrous things*; for they defect the Heat, and as it were dissolve the saline Menstruum; therefore take care, that the great use of them should not hurt the Body. 4. *Saccharines*, especially the Sweet and Terreous, as *Saccharum satur-ni*, &c. which if care be not taken hurt the Stomach. For if those that labour with nocturnal Pollutions, take a large Dose of the antiphthifical Tincture, and continue the use of it, they loose their Appetite. 5. *The Lixivials, that are urinous, especially the stronger sort*, as Spirit of salt Armoniac.

3. *Some fix and obtund, the Ferment*, as Opiates, which, as such are not convenient for the Stomach, for if the Ferment doth not master them, next Morning follows Vomiting, and by the use of them the Appetite is lost. For as the Stomach enjoys a pure balsamick Sulphur, so 'tis offended with Crude, impure and unacceptable Sulphur, as is apparent by Vomits, as Sulphur of Antimony, &c. and Opium not well corrected may be reckoned among them; these do much the same upon Choler.

These I have mentioned are good against all Acrimonies, as in a cholera, looseness, dysenteries, &c. in heart-achings, where besides the oily Carminatives and temperate Anodines, these are required and selected in Hiccoughs, Heart-burnings, &c. that we may not speak of those faults of the Appetite, that we touched upon before.

*The external Stomachicals* are chiefly, 1. *Acids*, as Leaven, Vinegar, &c. 2. *Aromaticks* with Wine in form of a Plaster or Pultiss. And they are chiefly resolvents and revellents in Hiccoughs, Vomiting, as also Carminatives; but terreous things profit little.

As

As to the *Matter* you must make a good choice both as to the *Vertue*, and their way of Acting.

As to

### *The Way of Applying them.*

You are in general to regard a delicate Stomach, and you must observe several cautions:

1. In all *Alteratives* regard the strength of the Stomach, which consists chiefly in keeping the Heat at a due level, and the Ferment in its natural state, or near it; and in an especial manner, that the Coats and Fibers of the Stomach be confirmed by moderate *Astringents*.

2. The Heat is not to be obtunded by things that are too hot, whose volatile Parts do evaporate, but the thick terrene Parts that remain, cannot be subdued; so Horse-radish are good in a moderate quantity, but to the strong Stomach alone, for it hurts the weak. So as *Platerus* reports, there was found a pound of Ginger in a dead Bishops Stomach.

3. *Coolers* hurt more than *Heaters*, for the same reason which we gave of *Cephalicks*: the Stomach is of its own nature cold, especially externally, so that Infants lying naked are often found to *Vomit*.

4. Never moisten too much, for all such things loosen its Tone; hence also no luke-warm things are good to strengthen the Stomach, therefore Stomachical Decoctions do more hurt than good. So fat and oily things, that are not aromatick, are to be shun'd, especially in moist Tempers. So all fat Ointments do harm.

5. In a hot and dry Constitution avoid *Acids*, all acrimonious things and *Powders*; unless much diluted with Moisture, otherwise they stick, but mucilaginous

lagnous things are convenient; therefore in such a case, Spirit of Vitriol or Salt induce a burning; for 'tis spoiled of its fermentative viscidty, and is easily eroded; this happens mostly in the Cholerick, and those, that have over distended their Stomachs with too much Wine; so that the Acrimony doth easily pierce the extended Folds.

6. *Topicks are applyed either to the Back-part,* because the upper Orifice inclines towards it; *or to the Fore-part,* where 'tis partly covered with the Liver. Indeed Aromaticks and penetrating Plaisters may be applyed to the Back; but the other application is most usual, where the Stomach is more naked; unless it be in those, whose Stomach cause their Back to ake, which happens often between the Scapulaes chiefly in Women.

7. *See, that you do not induce a contrary distemperature by the use of Topicks;* especially as to cold and moist, that we may not hurt by our endeavours to help; therefore you must not be over frequent in the use of them; but either for defending, as in Baths and mineral Waters, &c. or for revealing, resolving and strengthening chiefly.

8. *In altering the Stomach take care, that you hurt not any of the other Intraills,* either externally or internally, and chiefly, that you do not hurt the Liver which lies upon it. Therefore use moderation.

9. *Corroboratives are to be given rather upon an empty than full Stomach,* except the Sawces, that are good to correct Meats. And you may exceed in these, so as to hurt more than corroborate, as in the use of Mustard and other things.

10. *The Stomach is not to be over-whelmed with Medicaments,* designed for it self or other Parts; for as from thence proceeds the first good, so also

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the

the first fault; thus Magistery of Pearl was found in a certain Bishop, and in others other things.

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## BOOK I. SECT. III.

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### CHAP. VII.

#### *Of Hepaticks.*

**S**Eeing the Liver doth dispense Heat over all the Body, we must partly consider Hepaticks, as common with the whole.

#### *Their Way of Acting.*

Either they respect the *Vessels, Passages and Pores alone*, or with respect to the *lymphatick Vessels and the Gall*, as well as to the *Choler*; that it separates, or the *Tone and Fibers thereof*.

1. *Openers* do chiefly respect the *Passages*, for no Intraill is more obnoxious to Obstructions, because of its numerous Vessels, and hence *Aperitives* are the chief Hepaticks. What we have said of them appertains to this place: and so do *Diureticks*, which unless the Liver be dry, and even then, if well diluted, are good for the Liver.

So,

So, that we may here repeat some, 1. *Bitter things*, which do cleanse, cut and attenuate the viscosity of the Choler; as *Suctory, Wormwood, Centaury, &c.* 2. Those, that have *tenuous Parts*, whether *Aromaticks*, as Aromatical reed, Spike, &c. or *Acids*, as red Liver-wort, Mineral Spirits, &c. 3. *Absorbents*, as lixivial, but especially steel Medicaments.

These are of great use in Obstructions, when the Choler is mucilaginous, in the Jaundice, Dropsie, Cachexie, and the like.

II. Those, that respect the Choler, that we may not meddle with smaller things, are either those, that restore it when deficient, or check it, lessen it, or mitigate it, when it exceeds, burns, or is unruly.

Those which restore the Choler, are partly contrary to those, that restore the Ferment of the Stomach, and almost the same with those that increase the Heat of the Stomach, to wit, 1. *Sulphureous balsamicks*, as Aromaticks, Cinnamon, Mace, Ambergreece; and the *spirituous*, as Wine, Spirit of Wine, &c. 2. Those that abound in *volatile Salt*, either simple, or with biting oilyness, as Mustard, Hedg-mustard, Cresses, which do stimulate the former.

To these 3. belong *sweet things*, which increase Choler, and that by affording *mucilaginous*, and *viscid Parts*; so that it is said, that they cause Obstructions, and also *sulphureous*, when they light upon a Body that is hot and dry.

Seeing we have made mention of sweet things, we will enquire why *Galen* said, that Raisins were in their whole substance friends, to the Liver, and yet doth not attribute so much to Sugar; that familiarity of Raisins with the Liver, the electuary

of Raisins, which is also called Electuary of Wine, gave occasion to, which *Riverius* commends very much to strengthen the Liver, and for the Dropsie, who saw some Children cured by it. The reason may be that they qualifie the fluxibility and weakness of the Choler, which Sugar doth not do.

Sweet things are good in the Anasarca, and the Dropsie of the Belly, also in some respect, serves Cachexies, lax Tumors, and where the Blood wants rarefaction, for rarefiers do exalt the Choler. They are good for the Torpid, dull, Phlegmatick, and where there is no Gall, &c.

*Some Hepaticks Temper and check the Choler, as aperitives may do it by accident, as in particular, Cichoraceous Plants; where note, that some are called coolers, which are hot, as those we named by loosening Obstructions, and by kind cleansing; or Cholagogues, which also do it by accident; some do it of themselves, as,*

1. *Diluting things*, so in Tertian Fevers, or where the Choler is faulty; among other things Whey of Goats milk boyled with a little Cinnamon, or Anise-seed doth much good, either with Rhubarb, or some Clystus of Antimony dropped into, both which we use with good success; to these also appertain Potions, Mineral Waters, Infusions, &c.

These moist things also afford a Vehicle to Aperitives; where note, That in the Jaundice, Liquids, in the Dropsie, dry Aperitives are best; and those Liquids at the same time cleanse, and clear the Lympha, make it free, and restore Motion to it, and the Serum, which is the check of Choler, because it dilutes it, whether it be the *alimentary* Choler, which is part of the Blood, and is more rightly called bilious Blood; or *excrementitious* Choler, so called for difference sake.

2. *Bit-*

2. *Bitter things*, for the reasons before mentioned, for they also cleanse and open the Passages of the Choler, that it may freely pass into the Guts. Thus, that we may say nothing of Wormwood, the vertue of Aloes is well known, as being a great Cholagogue, so, that if you take it several times it certainly causes an hemorrhoidical Tenesme, mostly because it doth thrust the Choler that way, of which more elsewhere. So Rhubarb is called the Soul of the Liver, as well because with its acrimonious, bitter Parts it doth actuate the Choler, as at the same time strengthen with its terreous Parts.

3. *Acids*, whose name we must always repeat, the chief that belong to this place, is the red sandaline acid of Tartar, or the Dresdenian red Hepatick; which, as in many other cases, is very good for Pimples, Spots, the *Gutta rosacea*, and nocturnal Pollution, &c. for these Acids tame the sulphureous part of the Blood, and fix its volatile Salt.

4. *The terreous and absorbing*, chiefly the *nitrous* and *alkaline*, so also the lixivial Salts, and tasteless things, as Coral, Pearl, &c. the *nervines* also, or Cinnabarines, which we have found to be good in cases of the Liver, and the stubborn Pain of the left hypochondrium, when a branny Substance defaces the whole Skin, which we have thus often cured.

Note, That we find by good experience terreous things to precipitate and absorb Choler, as well as Acids, and ferous Humors. Therefore you must not always conclude, that when Alkalines do good, there must be Acids, that are in fault; for 'tis well known by experience, that terreous things



have benefited, where by the consent of all, Acids were not in fault, but the Choler did foam, and regurgitate, which they inhibit and bridle.

III. In the last place they strengthen the Tone and Fibers, as moderate astringents, whence it is as a rule among Practitioners, that the Liver delights in Astringents, of which we shall speak more anon. 2. Absorbents, especially of Steel, and among those the vitriolated, for they most of all strengthen the Liver. 3. The correcters of an excessiveness in Temper, mainly the moist and relaxed; so Mercurials are much commended by Paracelsus and others, by which, with Bezoardicum Martiale, as *Sennertius* reports, a desperate Dropsie was cured, by no other reason, then that the Mercurius Dulcis makes the Serum fluxile, by which it opens Obstructions, and carries away the Serum, which made the Tone lax. Thus Antimonials, as they greatly precipitate, and dry, are convenient by discussing superfluous Humors; so steel Medicaments are chiefly esteemed, especially in lax and moist Livers, because they dry, so also in the paleness of Virgins, great Spleens, where Humor abounds. But *Gulielmus Gilberus* (which is to be noted) denies them to be good in Obstructions, and consequently in Dropsies and scirrhoufness of the Liver, in the Jaundice and hypochondriacal Melancholy, in which, they are given not without much harm done. *Fallopins* and *Conringius* assert the same, or much to the purpose.

But we will moderate the thing a little; steel Medicaments in a dry form are more convenient in Obstructions of the Intails, Spleen, Liver, &c. where there is too much Moisture; as the Crocus of Steel, the cachectical Powder, &c. but  
where



where there is also dryness and scirrhoty, the moist and diluting forms are best.

Thus *Septalius*, and others speak of Rhabarb, that 'tis the enemy of the Liver in dry cases; and so the same may be said of it, as of steel Medicaments.

And these are properly strengthening Hepaticks, which are to be regarded in many other cases, as Cachexies, lax Tumors, Dropsies, &c. as to

### *The way of Applying them.*

You are to note,

I. *That the Liver is hurt by the continual use of Aperitives.* So that they err, and do much harm who endeavour to open Obstructions by Acids, Volatiles, and opening Decoctions, which is also true of Purgatives; therefore where the Pores are obstructed, you must indeed open, but so, that we do not do it impetuously, and hurt Nature; we have examples to this purpose in hypochondriacal People.

II. *Astringents are not always to be admitted,* we have said, that corroboratives must be Tonicks, and strengtheners of the Fibers with ter-reous Particles, yet there are some cases, where you must avoid Astringents, as when the Liver is scirrhou, in a Jaundice, stubborn Obstructions, &c. we call them Astringents, which hinder the Tone of the Bowels to grow too loose.

III. Hence therefore, let the Astringents have also tenuity of Parts, and the aperitives ter-reous Parts. Those that their force may penetrate, these

these that they may not loosen the Tone; which holds good both inwardly and outwardly. Let the example be, *bitter things*.

IV. You must not trust to Syrups *aperitive and hepatic*, for sweet things do easily hurt the Liver, because they soon turn to Choler, whence Obstructions come, as we shall speak by and by.

BOOK

## BOOK. I. SECT. III.

## CHAP. VIII.

## Of Spleneticks.

**G**alen chides them, that deny hepaticks, spleneticks and nephriticks, but those now-a-daies scarce allow any spleneticks, which absolve the Spleen from all faults; but we have said enough of this elsewhere; now we will view the Class of spleneticks.

*As the Liver doth dispense the Sulphur of the Blood, so the Spleen doth its Salt and Serum, but the splenetick Medicaments do very much agree with hepaticks, and are almost the same, therefore here also aperitives, which we shall run over again, are very proper.*

## Spleneticks

Do respect either, *acid austere Humors*, which fix the Blood, and induce melancholy, dulness, &c. as, 1. *Diluters moist and mitigating*, chiefly the nitrous, Whey of Goats milk, Mineral Waters and Baths,

Baths, which besides the Salts have most of their vertue from the watery Parts. 2. *Gentle aromatics, and bitter things*, which we numbered under hepaticks. 3. *Fixed lixivials and volatile alkalines*, so Salt of Wormwood, Centaury, Tincture of Tartar, Spirit of salt Armoniack, and more especially the Anti-scorbuticks, Wake-robin, Scurvy-grass, Celandine, noble Hepatica (or Liver-wort) Dittander, Cresses, lesser Prick-Madam, Dragon, Buck-beans, Horseradish, &c. belong to this place; for as Acids fix and concentrate the Blood, so these Volatiles both saline and sulphureous do quicken it, make it subtile and volatile; that it may be vigorized afresh. 4. *Terreous things, and resolvents, that come near the nature of Alkalines*, as Crabs-eyes boyled with Wine, which acquires a lixivial tast is much commended by Helmont; so Glauber doth mightily commend Coral to hypochondriacals, because it destroys the Acid; so the filings of Steel taken even in substance doth good.

And indeed *steel* is above all things in hypochondriacal cases, and indeed by no other means, than that of destroying acid Humors, let others affirm what they will to the contrary; for they act no otherwise than Aqua fortis, and acid Spirits do with steel, which sweetens them, their Particles being obtunded and growing vitrioline. Hence they are good in hypochondriacal Melancholy; the hypochondriacal Diseases, pains of the Hypochondria, Cachexies, in the beginning of Dropsies, in the Scurvy, Palpitation of the Heart, Faintings, and the like. Vitriolines themselves also do belong to these, that are either of themselves so, or are made out of steel; as vitriol of Steel, &c. which after their manner do also sweeten, absorb, strengthen

then and destroy acid and puttick Humors.

Or *lixivial, acrimonious, saline Humors*, whether they be alone, or are predominant with Acids, and such besides the *aqueous diluters* ( which are common ) are, 1. *Acids*, as those which fix the volatility of the Serum, and they profit much, in the hemorrhages of the cachectical and scorbutical; and we have cured some Persons after this manner.

2. *Austers things* which do as it were concentrate, and hinder too much rarefaction, such are, the *antiphthical tincture* of *Gramannus*, the styptick Powder, &c. and they are good when the Serum is fluxile, in colliquative Fluxes, immoderate Sweats, especially the nocturnal; which the scorbutical are much troubled with, where Opiates also sometimes take place. 3. *Terreous things*, as they absorb and precipitate ( which have been explained already ) as, of the *splenericks*, Ceterach ( or Spleenwort ) Harts-tongue, &c. and are convenient, as in several other cases, so in heart-burnings, heart-achings, and anxieties of the hypochondriacal.

Or they respect the tartareous muddiness, and phlegmatick viscidiry of the Blood, with more or less Serum; and such are chiefly, 1. *Acids*, therefore 'tis not absurd, that sharp mineral Spirits do most, if not all, in some hypochondriacals, for they cut the mucilage, and attenuate it; especially Spirit of Salt, &c. they free the first ways from mucilages which line, and incrustate upon the Stomach, and dispose them to be carried away by Urine or by Stool. 2. *Alkalines and mixt*, which are called *saponaries* they mightily take away and cleanse the filth, that lies in the Veins, as *Helmont* affirms; as Tincture of Tartar, its arcanum, Tartar vitriolated, &c. 3. *Aromaticks*, chiefly the carminative which both inwardly and outwardly do much good  
in

in those cases: yea both do friendly conspire in this, that they free the Passages of the Blood, that the Serum be not hindered in its duty; hence bitter things, and the rest belong to this place. For these correct Corruption, and render the deficient Stomach more potent and spiritualizing; and avert the scirrhoufness of the Spleen, and are exceeding good in Quartans and their Symptoms; for it cannot be, but if the Blood be too much fixed with Acids, or that the oily balsamick Particles of the Chyle be not freed, dirty, excrementitious, thick and tartareous Matter must be generated up and down, but especially in the Spleen.

Here, by the by, we will touch upon that curious Point, that the Chyle is nothing else, then oily balsamick Parts substantially immersed, and carried in a watery Vehicle, which is manifest from Mechanicks, not only by the example of Milk, but of other things, for as much as all resinous Essences mixed with water turn white and milky; of which more elsewhere.

Therefore to this place appertain. 4. *Abster-gents, diureticks and nephriticks also*, for 'tis certain, that the hypochondriacal do void with their Urin a thick, muddy, sandy matter, testifying of the tartareousness of the Blood; and that most nephritical People, and those that are troubled with the Stone, are also hypochondriacal; and things good in this case are good in the other.

Their matter may be largely found elsewhere, and may be explained, and chosen much better by the benefit of this key: as to

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*The Way of Applying them.*

It is manifest,

1. *That in general all specificks, and in particular spleneticks and antihypochondriacals are not all good in all hypochondriacal and splenetick People.* For as the austere and acid Humors, or the lixivial and volatile, or a middle sort ( which chiefly cause colliquative Sweats ) or the slimyness of the Blood be in fault, so the application of these varies, so that if any one should proceed by an inverted order, and promiscuously, he will only heap more Symptoms upon the sick Person, than he takes off.

2. *Volatiles, as well antiscorbuticks, as others, do often hurt the splenetick, yea and the scorbutick too ; it appears from what has been said before, for if the hypochondriacal Person has his Blood full of lixivial and alkaline Particles, if his Serum be fluxile and volatile, they are not convenient ; hence the promiscuous use of antiscorbuticks is an error.* We have seen from Spirit of Scurvy-grass, which was used for the extraction of other aperitives, as of Steel, &c. sad Effects and Commotions hardly to be allayed ; as preternatural Heat, Watchings, &c.

*But Acids are often convenient, so that it cannot be absolutely said, that one is hypochondriacal, therefore Acids are to be avoided.* Hitherto appertains *Lipsius's* commendation of Spirit of Vitriol, for he, when because of his sedentary life, he had contracted a great slimyness of the Blood, insomuch that he threw up vitreous Phlegm, used the Vinegar of Vitriol with good success.

4. *Hence*

4. Hence it is, that temperate things, absorbents, and dilutents are commodiously given to them; *Servius* says, that he often did more effectually apply himself to the hypochondriacal with cooling, than heating things, as with Whey, Mineral Waters, &c. because they temper the Heat of the Liver and hypochondria. So that these are not to be used without active things, nor those without temperate things. You must see, that the Serum is neither deficient nor abounding with salt Particles.

5. The Spleen requires stronger *Aperitives*, than the Liver, 'tis *Galen's* assertion, which although *Mercatus* opposes it, and grants it true only of the external use; yet 'tis true as to the third and first Class, where the Blood or Spirits are fixed, or where slimyness doth predominate; hence Spirit of salt Armoniack is very good for the hypochondriacal.

6. Sweet things hurt the Spleen, the most ancient *Pythagoras* is author of it, which *Hennius* borrows from him, for when one told *Pythagoras*, that he mocked him too much, *Pythagoras* answered, That biting and bitter things were good for the Splenetick, and sweet things hurt them; so *Octavius Horatianus* says, that Splenetical People had better abstain from sweet things, because they increase the slimyness of the Blood, and are near acidity. But they may be given sparingly, as the Vehicles of other things.

7. Order Motion after steel Medicaments, and have regard to the Ordure, that the sluggish Humors may be stirred and actuated, that they may descend the better; this is to be observed more especially as to dry, and solid forms, for they



they work very little without motion. As to the Ordure, the Excrements are to be black, which is a certain sign that Vitriol is called forth, and that the Medicines are dissolved. You are to note, that steel Medicaments are not to be given in dry forms, but when the Stomack is very strong to bear them and alter them.

# XI. TABLE

BOOK

## BOOK I. SECT. III.

## CHAP. IX.

*Of those, that respect the Bladder and Kidneys, or Nephriticks and Lithontripicks.*

**I**T being supposed from our hypothesis ( or supposition ) that almost all nephritical and arthritical Persons are hypochondriacal, that is, 1. That the matter of the Stone is a dry concretion, which in a natural state comes away with the Urin ( of which we have said more elsewhere ) or a tartareous Salt consisting of an earthy and saline Matter, tho a slimy, glutinous Humor may concur. 2. That their Blood doth abound in saline and tartareous Particles easily coagulable ; hence it is, that we shall discourse of lithontripticks in this place.

Nephriticks resolve, mitigate and drive out, and therefore they do respect,

1. The resolution of the coagulum, or the limosity of the Blood already tending out of the Vessels, and separated in the Kidneys and Bladder, and not excreted ; either because of the quantity, or the expulsive Faculty failing, which by the accession of Salines

lines fixed and volatile, do with the earthy Parts coagulate; such Medicaments are,

1. *Abstergents*, as the *aqueous* or *diluters*, which afford much Serum, that such Excrements may be carried off; whether they be Emulsions, Waters, or any other Liquid form, which are good in gravelly cases, when there is much sediment in the Urin, and a possibility of the stone to be produced: such are Whey, mineral Waters, destilled Waters, as of Parsly, &c.

2. *Sulphureous resolvers*, which very much hinder the concretion, and hinder the matter to make any stay, and they are either *temperate*, as the oyl, those that obtund, and take away Acrimony, as Sperma ceti, and other aperitives, which do good in some Obstructions, stoppage of Urin, the Stone, &c. or *more active*, which do as it were melt the Blood, and pour or precipitate the Serum into the Kidneys, as chiefly turpentine, which give a violet smell to the Urin, which is an evident sign of their vertue sent so far; so Juniper-berries, and other bitter things, as Oyl of Amber, and the like.

3. *Saline resolvers*, as cutting and detergent acids, as *acidum tartari*, acid mineral Spirits, as chiefly of Salt; or *soapy things*, *terreous alkalines*, and *lixivial absorbents*; which either, because of their hidden Salt, or because of the great force they have to destroy saline Humors, perform much; as Crabs-eyes, the salt of Plants, tincture of Tartar, &c. most *diureticks*, and the most powerful aperitives, and lithontripticks are of this kind. Hence you may see why lixivals and acids are commended against the Stone, for both cause resolution, correct clamminess, and destroy unnatural coagulations.

M

4. *Mixt,*

4. *Mixt*, which have an oyliness, and a terreous stony substance, as the Grains of Hipps, of Alkekengi, of Medlars, Date stones, &c. Powder of Sperma ceti, Crabs-eyes, and the volatile Salt of Amber; and other things that take away grumousness, and dissolve coagulation, which are then especially good, when grumous Blood sticks in the Passages, which is a dangerous case.

II. *They respect the saline acrimony and irritation of the Membranes*, as asswagers, moistners, coolers, absorbents; whether the flesh it self is hurt by an acrimonious caustick Salt, the Passages, Membranes or Nerves, as after Cantharides, the Bladder, and the Kidneys are alone hurt: or grieved by the weight or points of the Stone; such as help in these cases are,

1. *Aqueous temperate asswagers, sweet and mucilaginous things are saline*, as Gum-dragon, Gum-Arabick, of Cherries, pulp of Cassia, Raisins, Sebestens, Conserves of the Flowers of Mallows, which *Amarus Lusitanus* very much commends, *Fernelius* his Syrup of Marsh-Mallows, of Camphrey, &c.

2. *Oily aqueous things*, as sweet Milk, the Cold seeds, Poppy seeds, elect. diasperrn. *Fernel.* emulsions, which as they cure the Symptomes caused by Cantharides; so they asswage and lenifie the Parts at it were torn by stretching, take away nocturnal Pollutions, cure a strangury, caused by serous acrimony, &c.

3. *Precipitants*, and they, either styptical, as in pissing of blood, diabete, and other laxities, as Medicaments of Plantain, and our styptick Powder: or nervine, as cinnabarines, specifick cephalicks, and other temperate specifick Powders. So steel Medicaments themselves appertain to this place, of which *Heurnius* has a notable Passage, who when he observed

*Hip-*

*Hippocrates* to say, that the Diseases of the Kidneys and Bladder were hardly cured, commends the Juice of Steel in Uleers of the Kidneys, that is, a steel Wine made of Filings macerated in a strong and sweet Wine.

4. *Acids*, if a bilious acrimony doth offer it self, as red Liver-wort; so that according to *Hippocrates* his elegant Text; *Acids make a strangury, and cure it.*

And these, as we just now hinted, are good against pissing of Blood, the Diabetes (or overmuch pissing) nocturnal Pollutions, heat of Urine, yea in the Stone it self. Mostly, we are to regard Pains, as the Tyrants among indications: therefore,

5. To this place appertain *Opiates*, which in the Stone have a mighty use, if mingled with resolvents, not that they do primarily resolve, not that they clear the Passages, but that they quiet nature, and comfort the irritated *Arteries*. Nor doth it avail any thing, that some say, they obtund Nature, that it cannot expel; of which see *Opialog. l. 2. f. 2. c. 6.*

III. They respect the ways cleared and freed; which in the Stone have a mighty use if mixed with resolvents, that we may give leave, and prepare a way for an unwelcome guest: such are internal and external *paregoricks*, *emollients*, *lubricatives* and *moistners*, especially the Oyl, as the Oyl of sweet Almonds, which therefore we often give in the Stone, if troublesome Vomiting do not hinder us; Chamomil which being triply decocted doth also resolve; so that the Flowers in Broth do immediately help the Colick, Pain of the Heart and Stone: so fat Broths, and other things before mentioned; they sooner help, by how much the more they resolve: so some give Oyl of sweet Al-

monds with juice of Limons for a great arcanum. So *Walaus* says, that if you Purge or let Blood you do nothing, but if you give Turpentine with Manna and Oyl of sweet Almonds, you do the business. For this very cause the use of Filbeards are commended by *Crato*.

It holds also externally, for if the Bladder be obstructed, or there be an Ischury, emollient and resolvent bags of Chervil, Pellitory, Linseed, not omitting distilled Oyls which penetrate, and above others Garlick and Onions, which mightily comfort the sluggishness of a cold Bladder; so the simple Oyl of Scorpions, and that of *Matthiolum* are much esteemed.

Hence Oyntments, Pultisses Clysters, emollient Baths do much good to the nephritical. Therefore we prescribe them in the very fits, and emollient nephritick Baths, to sit in, and the Stone has often come out while they were in the Baths.

### *The Way of Applying them*

Is very much to be observed, which we shall show in the following rules.

1. *The Office of the Kidneys and Bladder are mutual*, for they are fellow causes, and therefore stand for one. As therefore the intestinal Medicaments are the same with the stomachical, so 'tis with the Bladder and Kidneys, therefore they trifle, that handle their Medicaments asunder, for the cause in both is the same, and therefore the Remedies must be so: note therefore, that when we would alter the Kidneys, we must always have regard to the Bladder; and so on the contrary, that we may not hurt one, while we cure the other, which is chiefly to be observed in active alteratives. They may

may be also separately affected, as with a Scabiness, Ulcers, &c.

2. *Nephriticks are not to be confounded*, you must not drive out, when you are to resolve or mitigate; nor are you to mitigate, when you are to dissolve. Empiricks do err very often in this case, when without any other regard, they preposterously and violently endeavour to drive out, as with Balsam of Sulphur, Oyl of Turpentine, Oyl of Juniper, and such like; and so cause bloody pissing, ischuries, &c. especially drivers out have no place, when the Stone or Matter sticks in such a place, whence it cannot be thrust out without harm, as if it be stuck in the Ureters; where you had better use resolvents together with mitigatives; so that Nature being comforted will more strongly attempt the expulsion.

3. *Resolvents are vain*, when a saline acrimony offends, then avoid all Acids, and acrimonious things and Wine it self. So diureticks are not convenient in the Stone of the Kidneys, in Ulcers of the Kidneys, in pissing of blood, and a Diabetes. For then mitigatives, asswagers, and strengtheners are best; yet use in Ulcers, gentle abstersives, and temperate Turpentine Medicaments, as those, that are boyled to a dryness; yea

4. *The Kidneys delight in moisture, but not excessive*. Hence all hot things, which by drying may consume the Serum, and so leave the Matter incrasated, are to be avoided, for so a Stone may be produced. So they are not to be drowned with too much drink and moisture, for by failing to do their business a Dropsie may follow.

5. *The Topicks of the Kidneys are applyed to the Loins; of the Bladder to the Pubes, or to the Navel; of the Ureters to the lower sides of the Belly,*

of the *Genitals*, as to other Parts, so chiefly to the *perinaum*, or between the *Cods*, and the *Fundament*; of the *Womb* to the *Loins* also, we observe, that applications to the *Navel* do best of all provoke *Urine*, by the consent of the *umbilical Vessels*.

6. *Hot Topicks* are more usual than cold ones, but this doth not hold always, for *Topicks* of *Plantain* in a *Diabete*, and cold ones in several other cases are good. Note this *Paradox*, you must not trust to cooling *Oyntments*, as in nocturnal pollution to *Galen's* cooling *Oyntment*, to *Mesues* his *Oyntment* of *Roses*, *Oyl* of *Henbane*, and such like, for *Oyls* are in their Nature hot, and do more relax than bind.



## BOOK I. SECT. III.

## CHAP. X.

*Of Uterines.*

**T**hey are also called *Hystericks*, and agree much with other things, yet they deserve a distinct Chapter, because the Womb is as an animal in an Animal, and causes many troubles and Symptoms.

*They respect*

I. Either the *Vessels and Ways*, which must lie open for the Blood to pass, and so *aperitives* and *deoppilatives*, cutting and cleansing things belong to this place, as well *internals*, as the saline and sulphureous, which we shall not here repeat: as *externals*, as Baths, Clysters, as well the common which mightily help the birth, as *merines*, such are fumigations, Baths to sit in, Pessaries, Unctions, and other Abstergers; tho. to confess the truth, this may be done all at a time, if we restore the natural disposition and turgency of the Blood and Humors, of which now.

II. Or the things contained in the Vessels, as the Blood, for here lies the uttermost of its litoral motion, which Women, that are well have a flux of every Month. This litoral motion of the Blood is that, which calls for *uterines*.

1. *Promoters*, which procure fermentation, turgency and motion; either,

*By rarefying and attenuating*, which in a special manner are called, *Emmenagogues*, or movers of the Menfes, as *only volatiles*, which have a volatile Sulphur, as Savin, Saffron, Angelica, Myrrh, Camphire, &c. *salines*, as Salt of Mugwort, Borax; but chiefly the *volatile*, as Spirit of salt Armoniack, and other pungent biting things; *bitter things*, as chiefly Aloes, which excels against the pale colours of Virgins, and so doth Elixir proprietatis; *aromaticks*, which both break the clamminess of the Humors, and free the Mouths of the Vessels from all filth, where it often happens to gather, whether phlegmatick, tartareous or mucilaginous, and dilate the Pores; in one word, they make the Passages clean and open, and sollicite Nature to an excretion. Where note by the by, *whatsoever promote the Menfes*, do hasten the birth, as Savin, Borax and their preparations, which also expel the Mole, when you are certain of its being; notwithstanding stimulatives alone do not perform the business, but also balsamick Comforters, as Oyl of Amber, Cinnabarines, Cinnamon, Malaga Wine, &c. To this place appertain various preparations made up of the aforementioned things, as infusions, decoctions, mixtures, elixirs, &c.

Yea *Purgers* belong to this place, which oftentimes bring down the Menfes the very day that they are taken; they stimulate, drive out, and give a new fermentation to the Blood; and *diaphoreticks*,

*ricks*, especially the volatile. So that we have often seen the bezoardick tincture of *Mich.* to have moved the *Menses* at unusual times, especially in succulent Women.

Or by *absorbing* and devouring acid, austere and styptick Humors, which too much fix the Blood; as the *fixed*, but not all alike, for Crabs-eyes, Chalk, Shells, Corals are not accounted Emmenagogues (or movers of the *Menses*,) but *those that sweeten* intimately, and saturate those Humors; such above all are the steel Medicaments, by which those Obstructions are best cured, as by *crocus martis aperitivum*, *vitriolatus*, *saccharinus*, the cachectical Powder of *Quercetan*, or his stomach Powder mixed with steel Medicaments, adding some Oyl of Cinnamon, which certainly serves very properly in this case.

These therefore are proper in Obstructions of the *Menses*, and a thousand symptoms, that follow them. In all which you must have the principal regard to the *Menses*, if you would proceed successfully.

2. *Retarders and checking things*, as when the Blood is too watery, acrimonious, bilious, so that the Mouth of the Vessels are opened or corroded; or if the Blood doth burst out because of Ruptures, or some other hurt received. The *excessive fermentation* is allayed by *cooling aqueous things*, which qualifie the sulphureous, saline, volatile Parts, and dilute them; by *terreous* and *styptick* things, which precipitate and disjoyn them, retard them, and bind them, as Plantain, Shepherds-purse, Corals, the Blood-stone, and other Astringents to be refer'd to this place; by *acids* and *austere things* which fix and tame them, as Spirit of Vitriol, Tincture of Vitriol, Tincture of Violets, Tincture of

of Roses, the styptick Tincture, and the antiphthisical Tincture of *Gramannus*, which help the immoderate fluxes of the Menfes, and *opiates* themselves.

And these are convenient in immoderate fluxes of the Menfes, child-bed Purgations, and Whites.

III. Or they respect the nervous Parts, and the substance of the Womb, as 'tis well known to be membranous, and to have a great consent with the Head, and to be fed with many Nerves; such are all *neruines* which are numbred under Cephalicks which have a balsamick volatile Sulphur. *Spirituons* things that are pleasant, as Bawm, Rosemary, Sage, &c. Castor, Amber, both having plenty of an oily volatile Salt, &c. But above all others *Cinnabarines*, as 'tis certain by experience, that *Hungarian* natural Cinnabar doth most good to hysterical People and epileptical; so the After-birth prepared, and Ivory, and Harts-horn prepared without fire, and other things; from which it appears, that all *cephalicks* are *uterines*, or that all cephalick Herbs are *uterines* and so on the contrary, because of the analogy, likeness, and agreeableness of the substance of both Subjects.

And especially *comfortable aromaticks* are *uterine*, and are specifick in hysterical suffocations, and their several degrees, and consequently in faintings and syncoptical cases, &c. They fallly now-adays comprehend hysterical Distempers under the hypochondriacal indeed most hysterical People are hypochondriacal, but that will not suffice. They are approved in difficult labours of Women in Childbed, either as they strengthen Nature and the Nerves, as cinnabarine things, which we have said to be good in the Stone, for that cause;

cause; or because they stimulate and move Nature, as Oyl of Cinnamon, Amber, &c. so also in pain of the Womb, and the Whites; for they profit when the Blood is ichoreous, serous, lax, and the Fibers weak and loose by comforting, and warming it and the Fibers; as the oily Balsamicks, Rosemary, &c. Hence it may appear why *Hippocrates* and his followers condemn Vinegar as an Enemy to the Womb, because it is so to the Nerves, by fixing its Sulphur, and depressing its volatile Salt; otherwise where there is an intention of cutting or subduing the Sulphur, as in mad Love, immoderate fluxes of the Menfes, &c. Acids are very good, if moderately used.

IV. Or they respect extravasated Humors stagnating about the Womb, whence Wind and putrid Exhalations, &c. do arise, which often happens, and cause various and grievous Symptomes, such are

*Balsamicks*, resisters of putrefaction, bitter and gummy things, and the resinous, as Aloes, Myrrh, Scordium (or water Germander,) Asa foetida, Galbanum, the essence of Amber, Myrrh, Asa foetida, the uterine Elixir of Crollius, &c.

*Resolvents* of the extravasated Blood grown grumous, or to prevent its being so, as Chervil, Crabs-eyes, Bezoardicum Joviale, Antimonials, and such like, they dissipate what remains, and take away hysteric and convulsive Symptomes caused thereby.

*Discurients* and penetrating diaphoreticks and sudorificks, as the bezoardick Tincture, Spirit of Tartar, the simple mixture, which themselves also do hinder putredinous Fumes, as also diureticks do very much cleanse the Womb.

Car-

*Carminatives*, which indeed are the best uterines, and those that are good for the Colick are found to be good for hysterical suffocations, as Zedoary, the carminative seeds, galinal, the carminative Essence with the uterine Elixir, Tincture of Tartar, Bezoardicum joviale, which in pains of the Womb, and after-pains are exceeding good.

And these profit against Wind in the Womb, (which we have observed in Cacochymies to pass away with a Crack) and in hysterick Passions produced by a stagnating putrid Blood, and when the Menfes, and after-purgations are painful with Anxieties, pains of the Back and Gripes, &c. As to

### *The Custom and Manner of Applying them.*

Tho we can say many things, yet we will touch upon but few of them.

1. *The Womb is pleased with sweet things*, 'tis a rule of many Practitioners, and much praised by *Hernius*. But it is not to be understood of those, that are absolutely actually such, which indeed have a great esteem, where the fermentation of the Blood is to be restored, because they promote its turgency, so externally in danger of miscarriage or abortion, Honey with *Spanish Wine* upon Bread is used; yet where the Blood is to be bridled, as in immoderate fluxes of the Menfes, and such like, they rather do harm; so sweet, sugared and honyed things offend the hysterical, raise Tumults, recal Symptomes, and exasperate; hence appears the true manner of using sweet things.

2. *Acids therefore and sweet things are not always to be avoided, nor to be promiscuously used*; this holds chiefly of Vinegar, for it has least of Sulphur in it.  
Those

Those Acids which are also sulphureous, as the Spirits of Salt, Niter, or the Cephalick, Spirit of Vitriol are more friendly to the Womb; therefore the Byzontine Syrup, simple Oxymel, and that of Squills and other Acids hurt the Womb; but those sulphureous Acids may, where need requires, be moderately used; it is apparent from diet it self, for when a Woman, that has her monthly courses eats sharp Sawces, or other acids, the flux stops. For they are hurtful by curbing the turgency of the Blood, and as they are enemies to the nervous substance of the Womb.

3. *Beware of volatile impellents in treating Women.* Therefore if a dubious case doth arise, we scarce proceed any further than steel Medicaments, which also strengthen, for it often happens, that we do not know, tho the Courses be stopped, whether the Woman be with Child or no; otherwise qualifiers and astringents are good, as to the Vessels of the Womb, and spirituous things, as to the vital strength of the Child.

4. *Where you must open, you must not only use strong drivers on, but also moistners, and where you bind, use also dryers.* So that the Physicians who in a defect of the Menfes use only oily volatiles, as Oyl of Juniper, Spirit of salt Armoniack, Oyl of Savin, Borax, &c. do mistake. Hence it is, that Harlots where there is no disposition to abortion use Savin, and such things to no effect. Therefore you must regard the Serum also, which is as well required to a turgency, as Blood it self; hence it is, that we always do more with moistners, as tartarised Tincture of Steel, tinctura Martis pomata, infusions, decoctions and other moist Uterines, than with other things.

5. *You must not bind in those, that are not with Child,*

*Child, without revulsion, and evacuation, not in seem-  
ing Women without regard had to the Child. For if  
any have an immoderate flux of the Menfes, (which  
often happens from Obstructions of the Vessels, and  
deserves to be spoken of by it self) Astringents  
do better after blood-letting. If one with Child has  
her monthly Fluxes, you must always regard the  
weakness of the Child.*

6. *In giving astringents always regard the tone of the  
Womb, both as to the Blood and laxity of the Fi-  
bers. Thus in the Whites common Astringents do  
not so much profit, as when mixed with aroma-  
ticks made of Rosemary, Wall-gilly-flower, Ivery,  
Castor, the Magistery of Grabs-eyes with Oyl of  
Aniseed, Amber, &c. ( which last is very good )  
for otherwise things do not succeed so well.*

7. *Uterine Clysters and Injections do excellently wash  
off and cleanse; but are not convenient for Virgins and  
seeming Women; so also Pessaries and other Topicks,  
of which we shall speak more in their place. The  
whole is mostly to be respected in these People,  
and extravasation seldom happens; but to know the  
better, what to do as to these Topicks, you must  
diligently enquire of those that are about them.*



## BOOK I. SECT. III.

## CHAP. XI.

*Of Arthriticks ( or Joynt Medicaments. )*

IN a more general acceptation they belong not only to the Joints, as pained and arthritical; but secundarily to other Distempers of the Joints, but seeing many do, as it were proceed from the same Egg, tho they variously transform themselves, as the Stone, the Gout, and the hypochondriacal Distemper, and change and chop one into another, insomuch that they go generally together, we may easily perceive the nature of arthriticks, for nephriticks are arthritical, and anhypochondriacals are arthriticks; the hypochondria do afford and send out the matter, the Kidneys coagulate, and the Joints receive it. But notwithstanding we will enquire more strictly.

*Their way of Acting* will be apparent, if we consider how many Classes of Medicaments they contain under them.

1. They respect the Serum whose fault is most to be noted in distempers of the Joints, and those of of kin to them: so that some taking their measures  
by

by that of the Gout, give the same Medicaments in Catarrhs and defluxions, and indeed not without reason. Such are either,

1. *Universals, evacuates and divertents* by stool, by Urin and by the Pores, as Purgers, Diureticks and Diaphoreticks, which in general do most of all help the Joints; nor can there be a happy cure without them, especially diaphoreticks, which do the main business.

2. Or *particular alteratives*, as to *quantity*, as gentle consumers and dryers, and so diverters of defluxions, as China-root, Sassafras, and other Woods which are commended. So as to *quality*, those which *qualifie* and dilute saltness, sharpness and acrimony, as the aqueous, and those which substantially moisten; and *Langius* says that *cooling moistners is the desire of the Gout*, or *invertents, absorbents and precipitants* which are various, which are mentioned in their place under anthypochondriacals, and may be all borrowed from thence. For all opening things, those that respect the depuration, and tone of the Intraills, chiefly *steel Medicaments*, and *antiscorbutick* also, are very proper, for these take away the antecedent and present cause, as acrimonious Salt, and procure a sweet and balsamick Serum. Unless you observe this, all Cures of the arthritical will be vain, and in this their cure and preservation consists.

These are convenient in the Joint disease, the Ischiadica, Gout of the Feet, and Hands, Catarrhs, Defluxions, and such like.

3. Or lastly *resolvents*, which make the Blood fluxile, as above all others *cinnabarines*, which most of all hinder coagulation, and as in other cases, so chiefly in these they make the Humors very fluxile. These, as also *Mercurials*, are very proper externally

nally in pains of the Joints, and other Symptomes of the Pox, where *Vigo's* Plaister of Frogs with Mercury is very good.

Or Arthriticks do respect the *Nerves*, to which we refer *Membranes, Ligaments and Fibres*, which suffer by the afflux of Humors, are weakened, irritated, &c. these are comprehended under Cephalicks; so that all *Cephalicks* are *arthritical*, because of community and the original.

But those that are chiefly and properly due to the Joints are,

1. *Those, that have a balsamick, oily, sweet and kind Sulphur*, as *Germander* and *Ground-pine*, which is also called (*Iva arthritica*) *Rosemary, Sage* and gummy things, to this appertains the *galbanerum* of *Paracelsus*, & of others, *Castor, Euphorbium*, &c. Nor is it against us, that these are not in all cases to be used; because of their different heat; for if there be a flux of Humors and Heat, *Germander* and *Ground-pine* are only of use, especially in the *Paroxysm*; but when the *Ligaments* and *Nerves* are cold, they require other things that are hotter; and such are not only good for arthriticks, but also in *Palsies, Atrophies, Wounds* of the *Joints* and *Nerves*, and chiefly in *serous ichorous Ulcers*, which yield not so much to *Astringents*, as to *corroboratives* of the *Parts*, that the due nutriment may be brought to act, and this experience doth attest. *Contractures, weaknesses* from *Wounds, Fractures*, &c. obey these *Nervines*; yea some *Ulcers* are never cured unless you renew the *Tone* of the *Part* with *Nervines*.

2. *Those that have a fixed Sulphur, that is friendly to Nature*, for all salt, acrimonious, acid Humors are asswaged by the viscosity of a kind Sulphur. Of this kind are *Cinnabarinos* which chiefly comfort nervous *Parts*, especially of the *Joints*; more

more especially if joined with Opiates. Thus they are beneficial in this sense, and as they respect the Serum.

3. *Volatile sales with an oily Sulphur*, internally given do good; yea these, and spirituous volatiles benefit externally; so Spirit of Harts-horn, and of salt Armoniack duly applyed comfort the Joints, so the water of Magnanimity ( or Spirits of Ants ) is very good externally: but Earth-worms are excellent, which have volatile Salt mingled with a kind mucilage: so that they please the nervous Parts, either bruised, or in Potions, or externally applyed, but they are most praised in the scorbutick wandering Gout.

These are good in Pains and Anxieties, especially in the Joint-diseases, Gout, &c. and in tremblings thence arising.

Or in the last place they respect *the pain* caused by the tension and vellication of the Membranes, *internally*, as Emulsions, Cinnabarines, Anodines, especially if you otherwise look to the fountain, the acrimony of the Serum, and cleanse the Bowels; or *externally*, where leaving all others, we shall only name. 1. *Paregoricks* ( or pain-allayers ) so Topicks of Milk, fine Flower, Saffron, &c. are commended, and fomentations of that nature. 2. *Nervines*, spirituous, sulphureous and urinous. For Nervines are the best Topicks in this case; as the vegetables I spoke of, and things made of Earth-worms and Ants, as the aforementioned Spirits, *aqua lumbricorum volat. aq. magnan. spir. C. C.* of salt Armon. Oyl of Soap, &c.

The

*The Way of Applying them.*

As to this, note in general as to Internals,

1. *That the tone of the Joints is to be preserved.*  
Thus hot and dry things which consume the Serum are not to be used, for you must keep a proportion of the Serum, and not take away the thinner, and leave the thicker behind, nor the ferrous, which are a Vehicle, and curb to the Cholera, leaving the acrimonious, salt Humors behind. Hence they err grossly, who by externals, as Baths, &c. omitting internal impellents, endeavour to cure the arthritical.

2. *You must not respect the Joints without the whole, nor the Internals without the Joints;* for your cure will be vain unless the fault of the whole, and saline Acrimony be taken away, so that there is no trusty cure by Topicks; but see that you do not offend the Joints by external Cold, Venery, Wine, and other things.

3. As to external applications, note that Topicks do often exasperate the Pain and the Diseases; because they do not take away the peccant matter, nor comfort the archeus; and assuage a little for the time, but cause greater mischiefs afterward; yea what help one time, hurt another time, some may be admitted for to defend and strengthen; and some may be better let alone.

4. So that in pains of the Joints, repellents, acrimonious things, or actually or potentially cold are inconvenient, for they weaken the Part, are enemies to the Nerves and Joints, and acids themselves come in to the list. So that what Pliny says, that M. Agrippa in a great fit plunged his Legs in Vinegar, and put off the pain, is not safely to be imitated.

5. *Unctuous and fat Emplasticks have place in some cases of the Joints, as in serous Ulcers and pocky cases, &c. but not so in the arthritical, and we have often known such things to hurt the gouty, yea many by this means have fixed the wandring Gout, and caused tophous concretions. So that Galen himself lib. 4. meth. med. cap. 3. doth rightly write that tophousness is produced in the articular disease of a glutinous and thick Humor, because not gradually digested, but suddenly dried by violent Remedies; and Fernelius observes, that the Pains are doubled by such means.*

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BOOK

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 BOOK II. SECT. I.
 

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## CHAP. I.

*Of Preparatives and Digesters.*

**P**reparatives respect Humors to be evacuated, and are so called because they fit and dispose them to be expelled. They are also called *digestives* because they make them pliable by concocting and maturing them.

They are either *internal* which we have not mentioned, and operate much like a chymical digestion by disposing and correcting; or *external* of which we have spoken before, and almost agree with suppuratives, but that they are used after the Wound is opened.

But that we may have a fuller knowledge of these things, we will note,

1. *That all Humors are not so easily purged*, as being not so fluxile, more thick or viscid, or being too fluxile, thin, acrimonious and sharp, &c. so that altho purgatives do stimulate Nature, yet the Hu-

mors do not obey, nor is Nature of it self able to subdue them.

2. *Purgers are not to be given promiscuously, nor are they alike profitable.* 'Tis an empirical trick to give Purgers without regard had to the peccant Matter: it is a custom of the vulgar People when they want an Appetite, or have a Fever, to give Purgers, by which they often add to the Distemper; but Physicians by the benefit of preparatives purge, what they should purge.

3. *Preparatives are alteratives,* for as all Medicaments are divided into alteratives and preparatives, so preparatives differ in nothing from alteratives, but that they are used upon intuition of evacuation by Purgers; therefore they perform two things. 1. They alter. 2. Dispose to excretion and evacuation.

4. *Therefore evacuatives and alteratives do modify each other,* for there cannot be a good alteration, where the abundance of Humors hinder it, which indicate evacuation; nor can evacuation be well performed, when the quality of Humors hinders Nature. Hence experience suggests preparatives, as for example, if we purge a scabby or a melancholy Person without effect; yet if we prepare him for some days with a digestive of Tincture of steel pomated, and other aperitives, things will succeed better; and these purifiers of Blood do not well without purgers of the Humors.

5. *They act, as alteratives do, by contraries;* they rectifie the Humors that are not obedient to the natural Heat; for all obstacles, that make Humors unfit to flow are to be removed, and excessive Qualities to be tamed.

6. *Some preparatives are universal, some particular,* we do not call them strictly universals in this place



place, which are convenient for all Humors, but for several, and are common and occur oftener. Such are *aperitives, antiscorbuticks, anticachecticals, hepatics and spleneticks*, for the most frequent hinderers of Purgers good effect, are obstructions, dryness or a scorbutick habit. Nor doth Tartar vitriolated, Cream and Crystals of Tartar, or the simple mixture deserve to be termed universal digestives any otherwise, then because they are excellent, and serve many indications. The particular are *alteratives, aperitives or moderate incrassatives*, taken out of several Classes, as out of Cephalicks for the Head, sometimes out of Uterines, and so consequently of diverse kinds, either hot or cold, liquid or solid, or of a middle nature.

7. *These do often at the same time dispose the ways, or operate the better when they are cleansed.* So that it is most usual to give lenitives or preparatives before purgers, that the Humors may be the better disposed.

8. *They respect the cacochymie or Humors, either in the Vessels, and mixed with the Blood or extravasated,* for as it is certain that excrementitious Parts, especially the serous and bilious are purged by siege; so by the alteration of the Tone of the Blood, and opening well, all things are made perspirable, and the Humors fluxile; yea they are oftener due to the Humors mixed with the Blood, for when they are extravasated, as the Choler and Phlegm in the Guts, they are more apt to be carried away without preparatives.

9. *They consist mostly of moist, watry and diluting things,* for they prepare best in the general; because they penetrate, subdue and take away the dryness of the Passages, which hinders much; therefore Practitioners do in that case give Poti-

ors, Decoctions, Infusions, Mixtures, &c. not without success. The rest, as salines, and things of great activity are given in small Doses, but they also want a vehicle.

10. *Preparation is not performed by Syrups and Waters alone*, Syrups indeed are convenient to induce fermentation in the Humors, but they are not to be trusted to alone without adding things appropriated.

11. *We do not need preparatives always*; they properly belong to material Diseases, that is of the Humors, where the matter is crude, and wants coction and digestion, according to the aphorism, *You must purge concocted things, and not the crude*. So that they belong chiefly to the Breast and intermitting Fevers, in a word, *preparatives are more for chronical Distempers than acute*. Therefore they are not convenient in hot and malignant Fevers, nor in the Diseases called immaterial, which require alteratives alone and not evacuatives; therefore preparatives are only for evacuation, but purgers have place without preparatives.

### *Their Way of Acting.*

Is by contraries; and fitting the Humors to pass away.

### *The way of Applying them.*

In respect of the matter, it is in a liquid body, in respect of time, before purgers, in respect of the indicant, in distempers of the Humors.

I. *Choler natural or excrementitious, and the acrimonious, oily, sulphureous Parts of the Blood, or in one word a bilious cacochymie*, as 'tis faulty by heat, requires

requires aqueous and sharp acid diluters, and is digested by them, and other temperate things; but if the Choler be *clammy and viscid*, then it must have cutting and bitter things, as in the Jaundice, &c. if very thin, 'tis prepared with Acids and terreous things, Mucilages, &c. Thus in tertian Fevers, Whey, Tincture of Violets, Tincture of Roses both vitriolated, Arcanum tartari, Tartar vitriolated, &c. are used; so also in the Jaundice and hot distempers of the Liver, &c.

II. *Phlegm*, as it is congealed *Serum*, requires attenuatives, heaters, resolvents, and such things as render it fluid with moistners. Note that here you must not dry overmuch, because the Phlegm will thicken: so that besides *aromaticks* and *bitter things*, acids, as Spirit of Vitriol, are very good against Phlegm, yet not omitting heaters and moistners.

These have place in the cachectical, quotidian Fevers, Catarrhs, Palsies, Barrenness, &c.

III. In a melancholy *Cacochymie* the deficient *Serum* is to be restored with moistners; and the kind vigour, when the acid and austere Humors are destroyed, is restored by warm *aromaticks*; for as Acids are good for the bilious and phlegmatick, so they are bad for the melancholy, by obtunding the Sulphur more and more.

But the atrabilious Humors, or the more intense sulphureous Parts of the Blood being raised by acid Salts, and exceeding in Acrimony, do require very temperate things, and diluters of the Blood, so that *nitrous things* and aqueous abstergents are most praise-worthy, and seeing the Intraills cherish this evil, you must use *purifiers of the Blood*, aperitives and absorbents, which are excellent.

These

These have place in Madness, hypochondriacal Melancholy, and in cutaneous Distempers, the Itch, the Mange, the wild Scab, Leprosie, &c.

1. The Serum is self being faulty only in quantity, wants no preparation.

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## BOOK. II. SECT. II.

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### CHAP. II.

#### Of Lenitives.

Seeing more or less doth not vary a species, *lenitives* and *purgers* may be handled under the same Class. They are called *lenitives* from their gentle, smooth and easie operation, they are properly such which are slow, and do but open the Body to take away the Excrements; hence they are also called *stercoraries*, for they do not so much carry away vitious Humors, as the Ordure alone. They are also called *benedicts*, hence we have *pilulæ benedictæ*, *electuarium benedictum laxativum*, and others, they have got this name, because they are friendly, yea partly alimentary; so that they leave no hurt behind them, but are altogether innocent. As to

Their

## Their Way of Working,

It doth not differ from purgers, (of which by and by) for lenitives do irritate, as well of themselves, as by accident. Those do it by accident, which dissolve or hinder the consistence of the Excrements, and make them fluxile, so that they easily pass off. Such are,

1. *Wet things*, so that much drink doth loosen the Body; therefore we advise costive People to drink plentifully, otherwise all irritatives are in vain: so Whey of Goats milk besides its nitrousness, conduces to loosen the Body by its liquidity.

2. *Mucilaginous, pulpy things*, moistners in effect, as Raisins and Currance both stoned, (for all those stones do bind) we prescribe the domestic use of these in stubborn costiveness with good effect; Sweet Peares and Apples boiled, Tamarinds, Manna, Figs, Mallows, which have their name from mollifying, Marsh-mallows, &c. tho these are more used now-a-days in Clysters, than by the Mouth.

Note that lenitives are of two kinds, either taken by the Mouth, or Clysters; but the end of both is to soften the Ordure, and fit it for coming forth.

3. *Fat things*, by making the Guts greasie and slippery, and hindering the hardness of the Excrements and taking it away, when it happens. So Butter (especially before dinner) is a lenitive; Oyl of sweet Almonds, and Linseed-oyl are such also; not mentioning, that these fats have stimulating saline Parts: thus Oyl of Olives in warm Beer is good in the Colick, that is joyned with a dryness and hardness of Ordure.

4. *Saline*

4. *Saline things*, which cut viscosity and grossness, as well the *lixivals* and *alkalines*, as Salt of Tartar, the Tincture of Tartar, which *Hartman* commends in costiveness and slowness of motion, as to stool; so that they are also used in Clysters: as those that have a light acidity, as crude Tartar, the Cream and Crystals of the same which loosen and cleanse very well. As also a *middle sort*, as common Salt, and particularly the *nitrous things*, as crude Niter, Niter antimoniated, arcanum duplicatum, which often loosen the Belly, as we have observed. Hitherto appertain *nitrous Plants*, which besides their watry moistning Quality, have also a stimulating abstersive nature, as the herb Mercury, Beets, Cabbage, Blites, and Sugar it self, and the Grounds mixed with Liquors, as new drink, or muddy new Wine, &c. which stir the Humors.

They do this *per se* (or of themselves) which sollicit Nature, tho mildly, as some of the salines I mentioned do, but they especially are such, as have a salino-sulphureous Acrimony; as not only Aloes, but all other purgers in a small Dose are lenitives.

And these are convenient. 1. *In every Disease*, if you are upon the safety of them, and have indications. 'Tis needless to give them in all Diseases, or first of all before other things; but they may be given in all, for 'tis good to have the Body open in all.

2. *They may be given with Meat*, as the alimentary, and those which have little or no Power to disturb the Stomach and the Humors, but are benign and balsamick, of which we have spoken before.

3. *These also help purgers*, as Prunes, Raisins boiled, with other things, and sometimes lubricatives are before all others, as *Walrus* notes.

They empty the first ways, and carry out the Ordure; notwithstanding, 4. *Humors in the first ways*

ways do not indicate lenitives only, but their reflag-  
nation and fulness do indicate the stronger Pur-  
gers.

5. Sometimes emollients and lubricatives are more  
convenient, sometimes detergents and stimulating  
things; those when the Stomach is strong, and the  
intestines dry, these when the spur of Nature is  
dulled, and the expulsion fails, you must not over-  
come the Stomach with the first kind, for its Tone  
is easily hurt; and you must not use it to the last,  
it must not be abused by either.

Lenitives are most proper for the weak, and  
may be substituted for purgers, as in teeming and  
breeding Women in Fevers, yea and the hpochon-  
driacal themselves, in bed-rid People, in Old Peo-  
ple, Infants and Children.

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BOOK

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## BOOK II. SECT. II.

## CHAP. III.

## Of Purgers.

**T**His is a large field we enter upon, to discourse of the way of operating in purgatives, and of various other things, that belong to them : but that we may make an intimate search into these secrets of Nature, we will show you *how they do not act*, and afterward *how they act or operate*,

1. *They do not act in drawing their like*, for what magnetick force can this be? unless we fly to the sanctuary of Ignorance, for the Humors are not of kin to the purgers neither in *qualities*, that like may dissolve its like, unless we consider accidental ones, as when Aloes is like Choler in bitterness, nor in *substance*, nor in any other circumstance. Nor if we should grant them to be like, will that be sufficient to produce such effects, as they do when they thrust out the Humors, and that sometimes with great force.

2. *Not by fermenting*, so that we may ascribe all



to this alone, and that by this means purging is performed; for many things may concur to the same effect, tho we do not deny, but fermentation may have its effect; but it remains a doubt, how such an excretion is made, as is done by Purgers.

3. *Not by a contrariety and venenosy*, so that Nature opposes it self to them, and puts the Humors to oppose them, first the bad, then the good, and at last the Blood it self. But these things will not go down with any Men of sense; therefore we will pass them by.

4. *Not by similitude of substance by reason of some Spirits, which are instruments of the Action*, which proceed from the specifick form of the Medicament, which pass from it as soon as it is actuated by the Heat of the Body, which *Martianus* stated, who has elegantly spoken of these things. We do not deny the resolution of purging Medicaments, that they explicate their vertue, and effluvia from saline and sulphureous Principles; but these conceptions are too wide, and touch not the Point, or clear it.

That therefore, these obstacles being removed, it may be manifest in what their force and efficacy consist; all seem to agree, that purgers act by *irritating and stimulating*; but authors do not so well agree, *whether that irritation be to be ascribed to Nature it self*, which perceives the stimulation of the purgers, or that the Humors being agitated by the Medicament do affect an out-let, and irritate Nature to expel them, and how?

1. Purgation is either *spontaneous* or *artificial*; the spontaneous is either *critical*, that is when 'tis with relief, Nature over-coming and acting well: or *symptomatick* which is with harm to Nature,  
and

and loss of Strength, both suppose irritation, either by an extraneous, or domestick cause; which sometimes sollicitates Nature as well as the other.

2. *The Cholera is the natural Clyster, but being disorderly and tumultuous it causes dysenteries and loosenesses; therefore a salino-sulphureous acrimony sollicitates Nature to excretion.*

3. *The acrimony of Purgers is apparent to the sense, when we tast Jalap, Scammony, and the like, and what is more certain then sense? Thus Hellebore, that we may name no more, is numbered among Masticatories, nor is it any thing, that that acrimony is more explicate, and apparent in some than in others, as we shall tell you by and by.*

4. *Purgers, especially the stronger sort, cause gripes, not only because of the commotion and flatulency of the Humors; but chiefly because of their acrimony, which vellicates unless it be mitigated.*

5. *We observe, that acids obtund the force of purgers; being a manifest sign, that the saline and sulphureous Particles are thus obtunded; thus Hellebore, Coloquintida and Antimony it self, or rather its Crocus or Glass are corrected and mitigated by Spirit of Vitriol, destilled Vinegar, &c.*

6. *If we take from purgers their resinous or sulphureous Parts, and their saline ones, yea otherwise then by Acids all the purging faculty is destroyed. So resin of Jalap doth proportionally purge less than in substance, because the saline Parts are washed off, and the resinous are separated; 'tis all one with other things. Thus antimony may chiefly stand for an example, of which you may note two Experiments, which may be refer'd to other purgers.*

376 1. *As long as the volatile saline, and sulphureous vertue remains in antimony, so long 'tis a vomitory and purge, otherwise it will not purge at all.* So its Glafs and Crocus have almost an infinite power of purging, which cannot be destroyed by a hundred infusions. Hence also its Sulphur vomits more gently, because the saline Parts are checked or destroyed in some measure; but antimonium diaphoreticum in which those Parts are sent away by the niter becomes a sudorifick, and may be given to a scruple or more, altho being melted by a strong fire it returns to a Regulus.

2. *As long as the body of antimony is not opened, nor the saline mercurial and sulphureous Parts freed, so long it doth not purge.* So that the crude doth not purge, but is given by some among the antiepilepticks even to Infants.

Nor is it any obstacle, that this acrimony cannot be perceived by the Mouth; so that *Harvey* doth elegantly say, that we neither tast, or any way find Antimony troublesome, either in the swallowing, or casting of it up again; yet there is a certain sense in the Stomach to discern what is hurtful from that which is profitable, and so to be provoked to Vomiting.

7. *The chief thing, that may help us in finding their way of acting, besides what was mentioned, is, that Purgers are Sternutatories,* observe how much sneezing is caused by Powder of Hellebore, the Atomes of Jalap, Flower-de-Luce root, Turbith and Coloquintida; (tho hardly useful, because of their violence) not to name many other things, by these the Membrane of the Nostils is irritated, so that the Brain is shaken, the Humors melted and with violence expelled by Nature, 'tis most certain, that purgers act in the Stomach after

ter the same manner, they pierce, vellicate, irritate and sollicit to expulsion.

Not is it any thing, that some sternutatories do purge, for it suffices that they have not the same texture of the Salt and Sulphur; as Pepper is more saline than sulphureous, not but such may purge, only it is not safe, because of their great heat, as 'tis certain of Euphorbium, that it is also a purger, but less usual, because of its violence; but among sternutatories 'tis more violent than Hellebore it self.

1. Let us therefore conclude *that purgers act by irritating, which spurs Nature to expel the Humors; and Galen says, that purgers have an acrimony and heat, tho not always sensible and manifest.*

2. *That purgers do act and irritate more or less, because of their saline nature more or less volatile joined with Sulphur.* They chiefly irritate the nervous Coat, and the intestinal Glandules. So that the Guts which otherwise move slowly, accelerate their motion: yea most purgers have an acrimonious tast, altho not so apparent in some, but in others 'tis almost corrosive.

3. *That Purgers do dissolve and melt the Humors.* This they do by their acrimony, so that the Ordu becomes thin, and the serous and bilious Humors are sollicit to pass away, and coming plentifully into the intestine Glandules, they are squeezed out by the motion of the Guts, and so the Blood comes to throw away its filth. But if the irritation continues, the very slime of the Guts will come off, and afterward the Mouth of the Vessels being laid bare and open, the Blood follows.

4. *Sup-*

4. *Supposing a melting and fusion of the Humors and an irritation of Nature, excretion must follow more or less as the Humors are disposed to flow, and Nature feels the spur. In a word the Humors are as it were thawed, Nature is irritated, and excretion follows.*

5. *This irritation is not limited, so that only one Humor is evacuated by one purger; but whatsoever occurs, or is in the Guts, or next Vessels is indifferently evacuated. Hence you may see,*

6. *That the presence of vitious Humors doth indicate purgers, and that they are taken away by them; so that purgers hurt healthy Bodies by an unnatural irritation, and melting away the laudable Humors, which Hippocrates also affirms.*

7. *All equally purge all Humors, but all do not so well, and that the Humor which doth most abound is most evacuated; but some stir the serum more, some the Choler, some carry away the Ordure more, and some are better for the faults of the Humors, not in their own nature, but because of circumstances.*

8. *It is hence manifest. That purgers take away the cause of Diseases, especially if it be in the Humors, which carry it away with them. Therefore this is to be done in the beginning, before the disease gets into the Nerves; so that,*

9. *Purgers, (as also blood-letting) are not to be used in a settled Distemper, for then, as Galen says, Coction must be performed; and the vigour, especially the animal is much weakened by Purgers.*

10. *Where the salino-sulphureous Acrimony is obtunded, the Medicaments operate weakly; and so proportionally; hence comes the difference, that some are mild, some moderate, some strong, all which*

depends upon this foundation alone, tho you must most of all have respect unto the disposition of the Subject.

For those who are easily stirred by this Acrimony must have the lesser Dose, because of the tenderness of the Body and Membranes; or because of Humors in the Body, that do more actuate the purger, and on the contrary; therefore we call it strength of Nature, when one is not so easily irritated, and so on the contrary.

While we are upon this Subject, you may note, that Authors do most commonly fallily put down the Doses of these Purgers, without consulting experience, yea that many of their Doses have never been used, as will further appear by examples.

We have yet somewhat to say of the elective Powder of Purgers, and how a distinction may be made between Cholagogues, Phlegmagogues, Melanagogues and Hydragogues, for 'tis necessary in Practice to make a *choice*, as well as to *Humors* to be evacuated by them, as the *matter* of them it self.

As to the *first*, you may perceive some difference from what has been said, that some are more convenient than others; yet if we look more narrowly, premising and granting, that all Humors are evacuated by all purgers, especially the Serum, Choler and Ordure; we say,

1. *That those, which evacuate Choler, do also purge Melancholy*, (for Melancholy is never without Choler, either obtunded by Acids, or sublimed by Acrimony) as Senna, Rhuburb, Scammony and Hellebore, & this agreement they have, that Senna & Rhuburb; Scammony & Hellebore differ only in degrees.

2. *Those that melt or dissolve Phlegm, do besides Phlegm evacuate the Serum also*, granting what we have said elsewhere, that Phlegm is nothing but  
con-

congealed Serum. Thus Agarick, and Gambogia, Mechoacan and Jalap, Coloquintida and Elaterium, do most of all differ in degrees.

Some therefore are milder, some stronger, some irritate more, some dissolve and melt the Humors more, some do both.

Here note by the by, that the Humors being too much evacuated by Cholagogues and Phlegmagogues, a Marasme and Atrophie may follow, especially in Children, and in others a Cachexie and Dropsie; of which *Mabius in fund. med. Physiol.* p. 368. speaks very elegantly.

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BOOK

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## BOOK II. SECT. II.

## CHAP. IV.

*Of unusual Purgers, and those that are seldom used.*

**A**S to this business, we will note, that some Purgers are often used, some seldom, and some altogether unusual.

The *not used*, are partly those, which do not purge at all, partly those that purge, but are exolete, because they are not so safe, or so sure, or so grateful.

1. *Turpentine*, which some have given with the first Milk or Beastings, and the Yolk of an Egg to expel the Stone; some say it is good for arthritick Distempers, but in vulgarly assigned Dose to ʒss. 'tis not usual, otherwise it may be given in a Bolus, or in Beastings; but is bad for the Stomach.

2. *Polypodium*, which is rather an Alterative, for we noted it taken by a Student to 3 Drachms without any purging; it is very good in the Itch, it lenifies acid, austere Humors, and smooths all roughness of the Wind-pipe, and helps other Distempers



stemperers of the Breast; but has scarce any place among Purgers, but as an additional thing, in Infusions and Decoctions.

3. *Fleamort-feed*, which is more in use for its mucilage in altering, than any way employed in purging.

4. *Syrup* and 5. *Honey of Violets*, which is given to lenise and cleanse, but not to purge; it may have place in Clysters.

6. *Syrup of Peaches*, and 7. of *Acacia*, they do indeed purge and loosen in Infusions, but they can hardly do the business of a Purge by themselves.

8. *The middle green Bark of Elder*, and 9. *The Juice of its root*, are out of use, because of their great and troublefom Acrimony.

10. *Afarabacca* is to be referred to Vomits, and not among Purgers, because of its volatile saline force.

11. *All Myrobalans* do rather alter, but may be in Infusions and Decoctions sometimes, but either for altering, or as lenitives.

12. *Euphorbium*, which is more a sternutatory, and cleanses rotten Bones, and comforts the Wounds of Nerves. See *Scultetus his Chirurgery*. 'Tis infamous for the Heat and Gripings, that follow it; with which we have known a Virgin afflicted even to death, having taken it from an unskilful Apothecary. *Hearnius* has noted the same effect.

13. *Opopanax*, and 14. *Sagapenum*, are numbered among resolvent, and discutient Gumms, nor need we Pills of *Sagapenum* with which one *Camillus* did successfully cure quartanes.

15. *The Armenian stone*, is quite out of use.

16. But *lapis lazuli*, (tho'tis by the common error of dispensatories esteemed acrimonious, so

that some prescribe to calcine it, and wash it fifty times;) notwithstanding is very innocent, and has its use, but more to alter, absorb and precipitate, than to purge. We have given to Mad and Melancholy People to a Scruple, with as much Jalap without any great stir or trouble.

17. *White Hellebore*, which was used in *Hippocrates* his time, but we having now more safe and pleasant Medicaments, have placed it among sternutatories.

18. *Our Flower-de-luce*, tho *Platerus* and others have some examples of the Juice given; yet seeing that with its Acrimony it hurts the Mouth, and is ungrateful to the Stomach, it is put out of request; but *Florentine Iris* (or *Flower-de-luce*) is sometimes added in lenitive Powders given to Infants; to which purpose, an excellent Powder is made of white *Mechoacan*, *Iris Flor.* & *Antim.* diaphor.

19. *Mezereon*, 'tis now scarce ever used for hydropical People, but by empiricks, so the Pills of *Mezereon* are out of use.

20. *Seed* & 21. *Bark of Dwarf-elder*, the use of these is gone from Physicians to the vulgar, who sometimes make sad Experiments with them.

22. *Bryonie* is more an alterative uterine.

23. *Buck-thorn Berries* are now more used by painters for the sake of their green Juice.

24. *The grains of Line-tree*, and 25. *Spurge-seed* are also out of use.

26. *Epithymum* (or dodder of Time) is now among the alteratives, 'tis given in Melancholy, and has an opening faculty, and strengthens with a light Aromatick quality.

27. *The Bark of black Alder*, is now only put into Oynments against the Itch.

*The*

*The seldom used*, which tho they purge and are given; yet not so often, are

1. *Cassia*. 1. 'Tis Pectoral. 2. Helps nephriticks, takes away the serous Acrimony of the Humors, so that 'tis good in the running of the Reins; but it hurts the Stomach by its flatulency, therefore must be corrected; 'tis bad for Hystericks, 'tis best given in an Electuary or Bolus, 'tis often given in Clysters, which it tinges with its own colour.

2. *Tamarinds*, of which note. 1. That they are often given to alter, because of their acceptable acidity. 2. That they are given in Pulp, Potion, Decoction, Bolus. 3. They correct a volatile sulphureous Acrimony, and a bilious Blood; so that they are used in Fevers, and immoderate Hemorrhoids. 4. They comfort a hot and dry Liver.

3. *Calabrian Manna*, 1. 'Tis more used for Infants, and delicate People in any Liquid that they take; if they be not troubled with Gripes. 2. 'Tis best given in Potions or Decoctions from  $\mathfrak{z}$ i to  $\mathfrak{z}$ iiss, or in a Potion with Spirit of Speedwel or Hyslop ana.  $\mathfrak{z}$ i. 3. In a Bolus, and in lenitive Electuaries, but very seldom. 4. It is good in diseases of the Breast. 5. Not good in bilious, and hot cases, as in Fevers, Jaundice, &c. and you must for this cause avoid too great a quantity; and for the same reason you may better place it among Phlegmagogues than Chologogues.

4. *Turbith*, it almost belongs to the first Class, for it can scarce be used, because of its Acrimony. 2. But it is sometimes used, because of its great force to cut Phlegm. 3. Spec. diaturbith, is used tho but seldom from gr. xv. to  $\mathfrak{z}$ i. 4. It is of great use in the Worms, and commended by *Heerius*. 5. They may be mingled with Jalap.

5. *The*

5. *The seed of Carthamus* (or *bastard Saffron*.)

1. Are good in all cases of the Phlegm in the Breast, Asthmas, &c. 2. It is not given in substance but in Emulsions with other things. 3. In Decoctions and Extract. 4. The Electuary Diacarthamum may be prescribed to ʒiʒ.

6. *Matalista*, a fresh Root brought from *India* like in colour to Briony, but that it is more dark and woody. 'Tis in vertue like *Mechoacan*, it is but a probationer as yet, and is not numbered among the select. The Dose is one Scruple.

7. *Hermodyctyles* are rejected by *Forestus*, who takes them to be the same with *Colchicon*, but it has place in the Gout being acuated with other things.

8. *Coloquintida*, 'tis never given in substance, nor in Infusion, except the Seed, which may be given so; much less in Decoctions; yea the golden Spirit of *Rulandus* is out of date, because of its bitterness. 2. It rakes the Guts, and easily causes bloody-Fluxes, if you exceed without correctives. 3. In Clysters 'tis tied in a rag, because of its violence and lightness. 4. It is not given, but in trochisc. alhandal as a Spur to others, or in an extract, but never alone. 5. The Trochiscs themselves are not to be given in the form of Powder, and alone, for Convulsions do often follow them. 6. They have place in killing and carry off Worms.

9. *Black Hellebore*, only the Fibers of it are in use, and the true Styriack Hellebore, for the Hippocratal or the Serulaceous with yellow Flower is weaker. 2. 'Tis used only in Infusions and Decoctions to ʒi. ʒij. ʒiij. with its correctives. 3. 'Tis never given alone, but with milder things much less in substance, tho *Manardus's* experience attests the

the contrary. Truly, *says he*, contrary to others, the older I grow, the bolder I grow. I have often given a Drachm of black Hellebore with two Grains of Diagrydium, nor was the purging troublesome or more than it should be. 4. The Extract is mostly given as a stimulative from gr. v. to ℥ss. 5. it has place in the Melancholy, the Mad, great Diseases of the Head, the Quartan, and other stubborn Distempers.

10. *Spurge* was often used by *Rulandus*. 1. It exulcerates the Bowels by its Acrimony, so that; 2. It is not given, but in extract to ℥ss. and with other things. 3. It is otherwise a Sternutatory of no contemptible use. 4. 'Tis good in the Dropsie.

11. *Eletcrium* (or *Juice of wild Cucumber*.) 1. In a small Dose to gr. v. 2. in the Dropsie, and that in Pills. 3. When mineral Waters do not pass, and then in the place of a stimulative. 4. It is no contemptible Sternutatory.

12. *Hedge-hyssop*, and 13. *Soldanella* (or *bindweed*) 1. Not but in Dropsies. 2. In Decoctions and Infusions to ʒi, ʒiſs, ʒij. 3. They are never given in Powder, because of their lightness, bitterness, and the trouble they create. 4. The Juice of hedge-Hyssop may be formed into Pills, but that's very seldom.

14. *Gambogia*; (or *gummi gutta*) which is as much as to say, a Gum for the Gout. 1. In Dropsies and purging ferous Humors it may have place. 2. 'Tis very dangerous in weakness of the Stomach, for it hurts it much. 3. 'Tis used more, when it is prepared, as *gummi guttæ rosatam*, *vitriolatum*, the Magistery of it, than Crude, for it easily causes Vomiting. 4. 'Tis given from gr. iij. to gr. vj. or ℥ss.

15. *Mercurius*

15. *Mercurius dulcis*, it is not to be given, but in Pills or a Bolus, never in Powder, because it hurts the Teeth, and the Gums. 2. *Well prepared*, not often rectified, yet select and washed, altho this lotion it self shows little, or nothing of corrosive Acrimony. 3. 'Tis good in impurities of the Blood, Itch, Pox, Manginess and Ulcers. 4. In serous Diseases, as the Dropsie; for all Mercurials make the Serum fluxile, and above all things prevent its coagulation, dissolve Phlegm. So that *Quercetan's Pills de la violette* deserve praise. 5. In Fluxes of the Seed, a simple and virulent Gonorrhœa, for it breaks and cleanses the Ulcer of the seminal Vesicles, which feed the Flux, so that at first the Flux seems to increase by the use of it. 6. *Against worms* of all sorts. 7. The Dose is from gr. v. to gr. xv. you had better give it with other Stimulatives, (for 'tis very slow of it self) as extractum Rudii, or with Jalap in a Bolus, &c.

These, I say, are not used so often, and very seldom by themselves, but more with other things, they are partly slow as cassia, hermodactyls, &c. partly violent and hurtful, so that they serve as Stimulatives; yea among these also there is choice, if we would be more curious than is requisite or practice requires.

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## BOOK II. SECT. I.

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### CHAP. V.

#### *Of the most Usual and Select Purgers.*

**T**Hese will be but few after the exclusion of the unusual, and less usual.

1. *Aloes.* 1. The best is the Socoterine. 2. 'Tis better extracted ( in order to lenifie ) with aqueous than spirituous things. 3. It operates better in a lesser Dose. 4. 'Tis better given in Pills than any other form. 5. It easily causes an hemorrhoidal Tenesm and Piles. 6. You must not abuse its use. 7. It moves the Menses, and cures the Paleness of Virgins. 8. 'Tis very good for Drinkers. 9. 'Tis more convenient for the moist, gross and fat. 10. Bad for the hectical, those that have Veins broken, the consumptive, and the dry, &c.

2. *Agarick.* 1. 'Tis never given in substance, both because of its Levity by which it swims in the Stomach, and because of its weakness and slowness, so that. 2. The Trochiscs of Agarick, altho the correction is not essential, must be acuated by nimbler things. 3. 'Tis to be given in small quantities

tities, least it molest the Stomach. 4. Sometimes they are used among Sternutatories. 5. But it is frequently used in Decoctions and Clysters. 6. It enters Pills very conveniently in form of an extract, yea, and is fit for the Trochiscs too. 7. 'Tis good for serous Distempers in the Head, Breast, and elsewhere. 8. 'Tis used in Infusions to ℥i, ℥iij, 3i℥, 3ij and the Trochiscs from gr. v. to gr. xv. with Scammony, &c.

3. *White Mechoacan.* 1. It has been less in use after Jalap was found out; yet it has its use still, tho Jalap is prefer'd to it. 2. Because Jalap is stronger, it has its use in weak People, Children, teeming Women, bed-rid People, and the like. And is much to be commended for its mildness. 3. It may be given with Stimulatives in Powder to ℥i, 3i℥. 4. In Infusions and Decoctions very often to 3i, 3i℥. 3ij.

4. *Rhubarb of Alexandria,* ( for Monk's Rhubarb is used most in Clysters ) 1. 'Tis chieftest among the select, mild Purgers. 2. 'Tis safe and innocent even for Infants (as in Syrup of Rhubarb with Succory) for teeming Women, and Child-bearing Women, ( who often use it in Infusions to cleanse the Womb. ) 3. It chiefly comforts the Liver, and allays and carries off bilious Humors, so that it doth much good in the Jaundice, Dropsie and Tertian Fevers. 'Tis excellent for the Hypochondriacal, because its of strengthening Quality; and is called the Soul and Treacle of the Liver. 4. It is most excellent where you would purge and bind as in a Cholera, Looseness, Bloody-flux, &c. for it binds and strengthens the Coats and Fibers, by its terreous Particles. 5. It strangely helps Colicks from bilious Humors by loosening and carrying it off. 6. It is very convenient to kill Worms, because



cause of its light bitterness, and purging Quality. 7. 'Tis given in Powder to ℥. ʒiſs. with other things, we scarce exceed this Dose, because of the nauseousness of its bulk, and other inconveniences; but we rather stimulate it with as much tartareous Medicaments more or less, and brisk things, as of Scammony, &c. 8. It is given oftener in Infusions and Decoctions, as chief among Purgers to ʒi, ʒij, ʒiij. but Infusions are far beyond Decoctions of it. 9. In extract it takes the form of Pills. 10. We use this Rhubarb, because of its benignity in intermitting Fevers, and in the beginning of malignant and burning Fevers. 11. It has also an excellent resolving Quality in Bruises, which makes *Langius* and *Rolsingius* commend it highly. 12. It is also good in Laxities of the Bowels.

5. *Alexandrian sena*. 1. It is the most familiar of all gentle Purgers, it almost always helps, never harms, so benign and innocent it is. 2. It is chosen and prescribed without the stalks, for these bind, and the Cods (if there be any) are windy. 3. 'Tis given sometimes in Powder, as in the *Diasenas* of *Wicrius*, *Langius*, *Montagnanus*, &c. but 'tis much disused, because of its diffuse Body, or at least used with stimulatives; sometimes a costiveness for four days is helped with *Sena* powdered, and Bread crumbled in Wine. 4. It is very often used in Decoctions and Infusions, either those that purge by little and little, or all at a time; so that *Sena* and Rhubarb are as it were the basis of all such Infusions and Decoctions. 5. Emollients are best joyned with it, as Prunes, Raisins, Salt and Crystals of Tartar, &c. 6. Because of its benignity and mildness 'tis used in all cases, in all Sexes, in all Ages, in Fevers, &c. where there is no place for  
other

other Purgers. 7. It is dedicated also to the Head and Eyes, as *Placerns* affirms, and is good in the Itch, Melancholy, in hypochondriacal Cases, in the Cancer, in the Leprosie, &c. 8. Its Syrup is kept in some Shops, and indeed among Purgers there is not a fitter for making of Syrups, seeing its ter-  
reous substance has a salino-sulphureous Acrimony easily explicated by coction. 9. It is given in substance from ℥ss. to 3℥. with Stimulatives in Decoctions and Infusions from ℥i. to 3i℥, 3ij, 3℥, 3vj. tho it holds true here also, that the vertue of the Liquor varies the Quantity.

6. *Jalap*, the most famous of all moderate Purgers, and most used, whence the laxative vegetable Powder, and many others are invented. 1. It doth not want a stimulative, but in very strong People, but suffices of it self. 2. Especially if it be not withered or perished, but compact, resinous, black, and as it were shining with sulphureous resinous Particles. 3. Nor doth it absolutely want correction, if the Body be open, and has not Obstacles, which may cause Gripes; so that what has been observed, that some have been griped after the use of it, is to be imputed to the Body, and not to it. 4. The best helper of it, as of all other Purgers is Tartar, or rather its Cream or Crystals; its best stimulative is Scammony, or its own Rosin. 5. It is given in substance to ℥i. or 3℥, to the adult and strong; to Infants to gr. ij. iiij, iiiij, whose Gripes and Pain contracted by the collected impurities in the Womb, it doth so well help, that they afterward sleep, as if they had taken Opium, which we have observed a hundred times. In the weak, tender and easily purged, it often sufficeth from gr. vi. to ℥ss. 6. It may be formed into Pills, Bolus, and a hundred other forms

forms according to each Man's Pallat and Desire; and 'tis used in all cases, but where there is a preternatural heat and dryness, or in Fevers, for in these it may hurt. 7. But it is not so well used in Decoctions and Infusions, because it is resinous, indeed the saline and gummy Part will be drawn out, but not sufficiently, so you may joyn it with other things, but you must not thus expect a firm effect from it alone. 8. It causes Vomitings sometimes with great effect; but more by Choler and other Humors abounding than by its own fault.

7. *Scammony*, which, sometimes from its preparation, sometimes from its Country, has got many names; 'tis called *Diagrydium* or *Sytian Powder*, it enters the list of the stronger Purgers, and shuts up this Class.

1. 'Tis almost never to be taken crude, because of the earthly filth, that is mingled with it, because of which mingled with the resinous Parts it grows milky, by pouring of water upon it.

2. Nor is it to be given alone, unless perhaps in Pills, because it hardly dissolves and stimulates strongly.

3. Nor to the weak, child-bearing Women, teeming Women, nor to those, that are troubled with the Piles, nor to bed-ridden People, &c.

4. You must choose that which is prepared in a Quince, which is now commonly called *diagrydium*, when properly the name belongs to the thing it self unprepared, or sulphurated; both which preparations can hardly be received as genuine; whereas they leave the good with the bad, and impure with the pure, therefore it is but superficial; but the preparation which is most genuine is to reduce it to a Magistery or Rosin.

P

5. It

5. It is not usual to give it in Powder, unless it be in a small quantity, and that with other things as a stimulative to them: for if it be taken in a good quantity, it clods together as you take it, and causes Gripings.

6. It is not to be given in hot Fevers, in the continual, malignant, or such like, for it violently stirs the Humors, and may cause after-purgations; whence weakness, and Death it self may follow.

7. As a stimulative or spur to other things, 'tis given to gr. ij. iiij. v. with Jalap and some preparation of Tartar; as a Basis in Pills, and chief helper to *Dis.* gr. xij. for so of Jalap and Scammony, ana gr. x. or xij. with Elixir proprietatis, and Aniseed Oyl are made most efficacious Pills, whether you add the Mass of pil. aloet. or no, dividing the Dose to take one half at Night, and the other, as occasion requires next Morning.

8. It is never given in Clysters, Decoctions or Infusions, for it cannot be dissolved in an aqueous Liquor, but dissolved in Spirit of Wine to gr. x. or gr. xij. it makes a Liquid form, that is pleasant, and efficacious, unless the Body be hot and dry.

Of the Compound the more select are, *species diagalapii Myrsinibri*, *Pulvis lavativus vegetabilis Rossianus*, *pulvis catholicus*, the Earl of Warwick's Powder, which is of great use in Fevers, whose Basis is Scammony, *extractum panchymagogum Crollii*, *catholicum Andernaci*, *pilule tartarea Schroderi*, *Quercetani*, *Bonrii*, and the extract of pil. cochiz, &c. in a word out of these select Purgers, infinite compositions may be made.

## BOOK II. SECT. I.

## CHAP. VI.

*Of other Purgers.*

**T**Hat we may reduce things into order, supposing from what has been said, that Purgers do most of all purge Choler, the Serum, and the Ordure, we will conclude.

1. *The most resolvable Purgers, or those which have the most resolvable Rosin, do most of all purge the Serum, as elaterium (the Juice of wild Cucumber) Gambogia, Agarick, Mechoacan and Spurge.*

2. *But those, that are less resolvable, or have a sulphureous Rosin less resolvable, do purge Choler, as Scammony, Rosin of Jalap, and such like.*

3. *Those that are of a middle kind, as Sena, Rhubarb and Jalap in substance, purge both Choler and Serum, and are more panchymagogues.*

4. *Those which purge gently, and irritate, purge the Ordure mostly, and that whether it be by mol-  
lifying, as Prunes, or by cleansing, or otherwise, as we have said before.*

For illustration of these we will touch upon other things, which tho they be not properly Purgers, yet they do purge sometimes with an univocal sometimes with an equivocal effect.

Of the first kind are *mineral Waters and Baths*, which purge all Humors, because of the sulphureous Salts variously mixed with them, as chiefly the vitrioline, the sulphureous, the aluminous, so that by the use of them the Intestines are scoured by their weight, and the Mineral dissolved in them, chiefly saline, and sometime Sulphur detained among the saline Particles, as 'tis well known that Sulphur does willingly lurk in salines.

Thus *artificial mineral Waters*, (as the *fulphureated Clyffus of Antimony*) purge as the natural do, and are diuretick, as they are; that Clyffus given in drink to one in a Fever we observed it to keep the Body loose, and being thus largely given it doth no harm; yea I have observed it to purge manifestly, when given by it self.

To these appertain most *nitrous* things. Thus from *Niter antimoniated* the same thing happens. So we have observed sick People to be purged by the *arcannum duplicatum* of *Mynsicht*, as if they had taken a Purge; this happens because of the saline deterfion and stimulation.

We have seen the same effect from *natural Cinnabar*, which as it sometimes causes a salivation for some days, which we have noted, so it also purges sometimes. I gave it once to an old Woman so old to cure her of dulness of hearing, which it did effectually by purging her, as if she had taken a Purge; for this has a mercurial sulphureous Salt, which (that we may not speak any more) is apparent, for being powdered and washed with Water, it will not alter, or corrupt the Water, tho it should stand in it several Months. Some

Some of the late Physicians would have Purgers to act by an acid, seeing they are sulphureous and resinous, and that every Sulphur is an Acid. But they confound the thing, the chymical Principles, and themselves; but we shall not speak any more to this business, seeing we have said enough already.

Purgings happen by accident very often after *resolvents*. So from our absorbing Powder sometimes Vomits happen with a present relief; thus have we seen from the *pleuritic Powder* a purulent looseness; we observed the same also in Bruises, and after great falls by the use of *resolvents*. For the *Archeus* being assisted by the Medicament, doth often turn the grievance of the morbid Matter to a good effect, and with a kind of strength throws out what is hurtful, showing thereby, that it actuates the Medicaments, and turns them to its own use, making them rather conformable to its own intention, than that of the Physicians.

We will pass by what Authors say, that they have instead of Sweat, provoked Stools by bezoardick Powders.

We shall also omit Poysons, sublimated Mercury, Arsenick, which have purged People even till death, and left sad Marks of their corrosiveness.

## BOOK. II. SECT. I.

## CHAP. VII.

*Of Vomitories, or Emeticks.*

**W**Hat has been said gives us a great light in the nature of Vomitories, and these may be referred to Purgers.

But tho Purgers do sometimes work up, and down, and Vomits too; yet it is designed, that one should work downward, and the other upward, and therefore we shall handle them apart and distinctly, for Vomitories are different things from Purgers.

They do agree in a *general end*, to irritate Nature to expel and evacuate; but differ in *their special end*, that one works upward and the other downward.

They differ partly *in themselves*, partly by reason of their subject.

They differ *in themselves* only in degrees, as some will have it, and that both are limited by being corrected, and that a lesser Dose of a Vomit is a Purge, and on the contrary.

But



But the business doth not stand upon the addition of a corrective, or limiting the quantity; thus Di. of Scammony is stronger, than so much Asarabacca or Orach seed; and yet it purges rather than Vomits; yea many strong purgers do cause rather an over purgation, then Vomits, so that we must find a more special difference; and tho some strong Purgers may turn Vomitories, yet this is not sufficient.

Hence if we consider Experience and Reason we may find, that Vomitories operate upward, by reason of a *saltino-sulphureous, volatile Acrimony*, which in Purgers is more fixed, and that Acrimony is either explicite or implicite, and subverts the Stomach. Thus *Asarabacca, Stone-crop, Flor-sc-radish*, &c. are Emeticks; so the Smoak of Tobacco, and its Infusion do cause enormous Vomiting; yea we have known Vomiting caused by Tobacco Oyntments used in the Itch.

Nor is Vitriol without its volatile Salt and Sulphur; for tis well known, that Vitriol of Mars helps Vomiting if there be a disposition to it; we shall suddenly speak of the volatility of Antimony, and therefore pass it at present: This volatility doth sooner act upon the Stomach and irritate its Fibres more nimbly; hence Vomiting proceeds.

Vomits and Purgers differ also in their Subject, as the Humors, that are to be evacuated do vary; for the volatile and bilious are to be expelled upward; and the heavy and fixed downward for the most part.

Therefore they do not act by a *specifick Quality*, or some peculiar propriety, not by *aversion* or *loathing*, or because they relax the upper Mouth of the Stomach, which indeed is true of fat and pul-

py things; but by their salino-sulphureous, volatile Acrimony, *not only by a greater irritation, but also because of a greater volatility.*

They operate more violently and evidently, because Vomiting is a motion more against Nature, than purgation; and that with a brisker irritation, so that those who have the inside of their Stomach tender, bare or lax, are most easily moved to vomit.

Emeticks are more universal, and throw up vitious Humors, as with an engine, and do more thoroughly unroot what Purgers leave behind and untouched, so that in in great and Herculean Distempers they often bring relief.

They evacuate not only the filth of the Stomach, which is often as it were incrustated to its Coats, but all other Humors they find in their way, especially the Serum and the Choler, which is as also the Juice of the Pancreas, sometimes thrown into the Stomach by strong Vomits, so that after Vomits are all cast up, a new irritation happens from Choler, and often immoderate *after-vomitings.*

Thus we see upon antimonial Vomits almost an uniform Matter cast up, and 'tis much doubted, Whether it proceeds from the Vomit so altering it, or whether it is generatred in the Body; to answer which, we say, that the Medicament doth irritate, stir and melt the Humors; but that appearance happens from the Choler, which has much Sulphur in it, so that if it be dried it grows inflammable; so that it undergoes various mutations, and performs all that is observed: so that such a Medicament is not friendly, altho it has no venomous Quality.

But these have their degrees, for some are *mild*, some *strong*, as chiefly the antimonial which operate

rate

rate kindly or vehemently according as the Dose is more or less.

Note, that the gentle ones do rather assist Nature than provoke it, and are not properly Vomits but may be Vehicles, as fat Broths, &c. therefore we will lay down, which are the unusual, which are those, that are seldom used, which are the select and most usual.

*The not usual are,*

1. *Luke-warm Water*, which indeed, as other luke-warm things, may well be a Vehicle, beause Tepid things cause a nauseousness, but you cannot expect from it, as from a Medicament.

2. *Oyl and Water*. 3. *Meath* are never ordered to that purpose.

4. *The root*, and 5. *The seed of Orach*. 6. *Of Melons*. 7. *Of Pompions*. 8. *Of Cucumbers*. 9. *Of Betony*. 10. *And Daffodil roots* are all exolete: altho some would fain use Orach seed in Decoctions. 11. *Fresh Figs* eaten, and Water drank after them, which was the Esopick Vomit. 12. *Radish*, as to its *Juice, Seed and Rind*, cause nauseousness, but are not prescribed. 13. *Walnut tree*, its *bark and root* have a vitrioline, and a stimulating Nature, so that the root is commended by *Fontanus* to make a Pessary of, to help the birth, nor are the tender tops of it in any request, tho *Musserus* commends them in suffocations of the Womb (as all vitriolated things are commended,) others commend them for the disease called *Cholera*. 14. *The green tops of Elder* and its *root* are disused, which *Mindererus* affirms to be more vehement than Antimony. 15. *Juice of the Root and Bark*, of which that vehemency is more particularly mentioned; the green Buds of Elder

Elder are used, as Sallet with Oyl and Vinegar in the Spring time, and so purge strongly, some say these Buds purge downward if they are pulled down in the gathering of them, and Vomit if otherwise. But 'tis certain, that the Elder has a Sulphur, that is nauseous in it, which Vomits or Purges, as the Body is disposed; and even antimonial Vomits do after turn Purgers according to the Body and Humors, that it meets. 16. The Oyl of the little stones of Elder and Dwarf-Elder, but they are now among Vulneraries, as in the sambucine Balsam of Sulphur, and the Dose to 3ss. is too little. 17. The Oyl of the Leaves, and Flowers of Dwarf-Elder. 18. Spurge seed and Spurge root. 19. White Hellebore. 20. Decoction of Hyssop. 21. The Leaves of Hedge-hyssop. 22. The Flower and Seed of Broom; some use them in Emulsions, but we can spare them. 23. Bean trefoile. 24. Mesereon. 25. Great Spurge. 26. Rocket. 27. Sow bread, which is never used, nor has it indeed an absolute vomitive Power. 28. Nor is Tabaco an usual Vomit, nor is its Syrup of such great vertue, but we can be without it, altho 'tis yet kept in some Shops. 30. Mans-nails, which Heerius commends, but who did ever use them for a Vomit? yea certainly they must cause it, rather by a loathing of them, than any vertue they have. 31. *Nux Vomica*. 32. Cheese curds. 33. Briony, tho when 'tis green it has a nauseous and rank tast.

And seeing Vomitories are as well Chymical as Galenical, those also are not equally used; as the Mercurial, as *flores Mercurii argentei* (or the silver Flowers of Mercury) azoth, precipitate and turkish Mineral, &c. which are much disused for vomiting, tho otherwise of great and good use. And  
Regler's

*Regler's aurum vita*, so much commended against Philters, is out of request.

But in general they are less used, nor are they rashly to be given, which 1. Much relax and weaken the Stomach, as Oyls, and Fats. Quaffed up in large draughts, but they hurt not moderately taken, and may be used for Vehicles. 2. These which have a greater vehemence, than is required in Vomits, as those of Hellebore, and others already recited. 3. Those which cause Vomiting, are not Vomitories, and are Enemies to the Body, and Nerves, as Mecurials and such like.

BOOK

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 BOOK II. SECT. I.
 

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## CHAP. VIII.

*Of Vomitories seldom used, and choice good ones.*

**T**He middle sort of *Vomitories*, or the *seldom used* are,

1. *Afarabacca*. 1. 'Tis more used in Infusion, because 'tis milder so, but in Decoctions, unless very light ones, it looses its volatile Parts, which cause it to vomit, and consequently is unfit for the purpose.

2. It is more used, as to the root, because it is milder than the Leaves, which are a rustick Medicament; not many years since a Country Man dyed with over-vomiting after he had taken a spoonful of the Powder of *afarabacca* Leaves, and the Physicians could not save him.

3. Its coagulum, or extract is more mild, nor is this to be trusted to, in producing a due effect, you may take ʒss. of this by it self, or in some excipient to form it to Pills.

4. Electuar. diasar. Fernelii may be given to ʒii. or ʒiʒ. in a Bolus, and that very conveniently.

But

But Vomits of Asarabacca are most useful, when Phlegm sticks very fast in the Stomach, or Parts adjacent, as in Quartanes, Quotidians, and such like.

2. *Gambogia*, or *Gummi gutta* to gr. iv. or v. it is then most used when you would have a Vomit or two besides purging downward: see examples of Vomitories made of this thing, in *Lotichius his first boock of Fevers*.

3. *Simple Oxymer of Squills, the helleborated, &c.* is used in Asthmatick cases, for it cuts and attenuates Phlegm, and so helps the Actions of other Medicaments, 'tis conveniently added to vomitory Potions, but 'tis hardly to be called a Vomit of it self.

4. *Oxyssacchar. emet. Ang. sala* is used, tho very seldom, after the same manner, and to the same purpose.

5. *Vitriol* is wonderfully dealt with, some praise it, some blame it. We shall tell you, what we have found by experience.

1. *Vitriol* is not given in substance, unless it be *Vitriol of Mars*, which in faintings, when the Matter may be resolved or cast out, doth very good Offices from gr. i. to gr. ij. and 'tis an exceeding mild Vomitory. It is most certain, that in Anxieties, Paleness, Weakness, &c. where there is proneness to Vomit, it doth best of any thing, as our absorbing Powder: at least it profits in sweetening, and resolving the Humors, which I have tryed a hundred times in Pains of the Stomach.

Hence it is with me a great doubt, whether according to *Walaus*, *Mercurius vitæ* with *Vitriol* doth purge only downward, seeing it is a Vomit of it self, and that we have experimented a Vomit of this kind, which did indeed work strongly upward.

2. *Gilla*

2. *Gilla Vitrioli*, or white Vitriol depurated is almost out of use.

3. *The Salt of Vitriol*, which is called the Manna of Vomitories, because of its mild operation, and mightily commended by *Ang. Sal.* who as *Conringius* says, is the only Person who doth not lye among Chymists; so *Langius* calls it the Manna and Alpha of Emeticks, who commends it through a whole Chapter, and always carried it in his Pocket. These two Authors are as good as all, and we find by experience, that it is not violent if rightly prepared. But note in the first place, that all vitriolated Emeticks have an ungrateful copper tast, which draws and binds the Mouth, which renders them unacceptable.

They are very proper for lax Stomachs.

So they are in Distempers of the Head, because of their gentle anodyne Sulphur, of which you may consult *Langius*.

Lastly, I do not believe, that Salt of Vitriol will re-vitriolate; or acquire the Body of Vitriol in the Stomach, for altho *Willis* finds by experience, that all the Parts of Vitriol, which are drawn out by the fire, its Phlegm, Oyl, Spirit and Caput mortuum, will join together again, yet this is scarce to be expected in the Stomach for several reasons; nor doth it avail any thing, that Salt of Vitriol will draw a certain vitrioline Spirit from the Air, and become Vitriol again; for the Air doth not get into the Stomach, but a little along with Meat, and 'tis so little, that it signifies nothing; nor is it the Salt of Vitriol, that doth attract the Spirit, and cause it to be regenerated, but the Colcothar of Vitriol, and that by a far different means; as may be abundantly proved by Experiments, for if we know, that by the means of fire vitrioline, sa-  
line



line Parts fall together and are concentrated, if we know the Spirit of Vitriol to be nothing else, but the acid Salt having required a fluor, and distilled by the means of a little Phlegm, which being all gone you have no more Spirit, and how at last a most acid Oyl doth rise, we may easily gather, that you need not attribute the regeneration of Vitriol to the Air, by gaining a Spirit from it, but that some Spirit of Vitriol remains in the Caput mortuum, and that the Air doth not only make the Pores more lax, and by communicating moisture to it, doth make the Body of it fit to be distilled again, by loosening the saline Parts which were compacted with the terreous, and so to yield what Spirit it has in't.

To conclude therefore 'tis certain, that the Manna, or Salt of Vitriol may safely be used, but because 'tis more ungrateful, than Vomits of Antimony, and not so quick and effectual, it is not as often used, as they are, unless it be in some cases, and then it should be well prepared, for upon this the Chymists lay the greatest stress.

4. *Sulphur of Antimony.* 5. *Its Flowers*, of which the first works weakly, and with an uncertain effect; but the last work more vehemently, and therefore are excluded the number of select Vomitories.

### *The most used, and select.*

Are many, if we look upon their variation; but they proceed from one fountain, and these are antimonials.

*Crude Antimony* is no vomitory of it self till its saline and sulphureous Parts be explicated, either of it self, or by fire alone, or with some Salts; and it grows a strong Vomitory.

*The*

The Vomitories of *Antimony* are either the more correct, or the more crude ones, and these are either the more mild spoken of before, as the *Sulphur* and *Flowers*, or the the more vehement as the *Glass* and *Crocus*.

It is never usual to give these in substance, because of their violence, which cause Men to vomit to death; and tho *Rolfincius*, *Willis*, and others have such forms, yet 'tis wiser letting them alone, nor doth the *vitriolated Glass* of *Antimony* deserve any better, tho often washed with Spirit of Vitriol and dried again.

They are corrected, and made more wild,

1. By *infusion*, as in Water, Acids or Wine, which is the best, for Water doth take out the virtue, but very weakly.

Hence it is, that we have *aqua benedicta Rulandi*, of which we have many descriptions; some will have it made of the *Crocus*, and others of the *Glass*. But the best is, that of the Author in his 5 Century, obs. 95. for he takes *Crocus metallorum* from the bigness of a Lentil to that of a Pease, and infuses or macerates it for a Night, in Water, Wine, Beer, or other Liquor proper for the Distemper, and in case of necessity boils it. The Dose is from  $\mathfrak{z}\mathfrak{i}\mathfrak{ss}$ . to  $\mathfrak{z}\mathfrak{i}\mathfrak{j}$ .

But you are to note. (1.) That the *Crocus metallorum* (which is also to be understood of all antimonial Vomitories, for the *Glass* may be so used, and that made of it self, or with the *Borax*) which is made with addition of *Tartar* is not to be taken, but that which is made with a like quantity of *Niter*, either with one detonation in the Mortar, putting a live Coal to it, or by successive detonations, which agrees with the *Glass* of *Antimony*, yea many with some small addition, call it so;

so

so that to this end Glass of Antimony made by it self may be used; but the other is flower, and not so fit for this use, but very fit for collyriums.

2. None must prescribe this aqua benedicta, unless he knows how 'tis prepared in the Shops.

3. All Infusions are first to be filtrated to avoid mischief.

But this preparation is more simple and crade; whence it is further perfected

2. By precipitations with Salts, as *Mercurius vitæ* commonly so called, tho it has nothing of the Mercury, and is a convenient Vomit, and is nothing else but the Flowers, or rather the precipitate of Antimony dissolved and swallowed up by the Salts; hence it may be freed, and sweetened with common Water. You must not without necessity exceed three Grains.

Hitherto appertains *Mercurius vitæ tinctus*, or *rosa vitæ mineralis*, see *Rosincius* in chym.

3. By impregnation with Tartar, which is the best of all preparations, and the most safe; that is, when the Crocus prepared without Salt of Wormwood, or the Flowers, or the Glass is boiled with Crystals of Tartar filtrated, and the Crystal thence arising given from 1 Grain to 2, 3, 4. and this now a-days is the most select and usual Vomitory, which has never failed us if rightly prepared, which is no small matter. For thus the vehemency is checked, the vertue is reclude, and by, as it were, a Compendium joined with the Tartar, so that we have given it safely to Infants,

Of this you make Pills, Powders, and what you will.

We must refer to this place the *Oxysaccharum emeticum* of *Ang. Sala*, of which we made mention above.

To end this business we will note, that neither Emeticks nor Purgers are to be given in too little a Dose, for 'tis a shame they should not work; nor in an excessive Dose, least you hurt the Person you give it too, for as you are not to fear the harm Vomits may do, yet you are not to neglect it.

As to the way of exhibiting purgatives and vomitives, seeing we have said much of them in their places, you must refer what has been said to this place.

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BOOK

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 BOOK II. SECT. II.
 

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## CHAP. I.

*Of Alexipharmacks.*

**A** *Alexipharmacks* in the general acceptation of the Word are such, as resist Poyson and malignity: tho *alexiterials* are stated against the biting of venomous Beasts, and *alexipharmacks* against Poysons and deleterial Medicaments; yet they are used now promiscuously. They are speciously called *Bezoardicks* from the Bezoar stone, insomuch, that Medicaments, that have not the stone in them are so called, because of the vertue that they possess; they are also called *antidotes*, altho this word belongs more to some special Alexipharmacks.

That we may speak of *their way of Acting* in our wonted method, let us suppose.

1. That Poisons do violently oppose natural Heat, or the frame and texture of the Blood and Serum, and their intimate mixture.

2. That Poisons do not so much act with occult Qualities, as with manifest; yea according to this

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supposition; as they more or less cause a resolution of the Blood in a violent manner, according to the degrees of their energy.

Hence many errors crept into Physick, while they rested in occult Qualities, and considered no farther, not enquiring into the Nature of Poisons, or the activity, or vertue of *alexipharmacks*, which hitherto have been thought to act by an occult way, hence proceed those many praises of the *Bezoar stone*, as if it subdued all Poisons promiscuously, and that which had not this great power they rejected as not genuine, but esteemed it as counterfeit and false, from which indeed you may be convinced, that there never was a true one. The reason is the same of the true *Unicorns-horn*, &c.

*Alexipharmacks*, or in a more usual term now-a-days *Bezoardicks*, are,

1. Such as resist putrefaction, and keep the Sulphur of the Blood, and its oily Parts entire, least it turn vappid, and that either by vigorizing the Blood, as volatiles, bitter things, oily aromatics and balsamick, such are Angelica, Carline Thistle, Zedoary, Myrrh, natural Balsam, Juniper Berries, and many others: acrimonious pungent volatiles, sulphureous and saline, as Garlick, the rusticks Treacle, Camphire, &c. hitherto appertain Spirit of Harts-horn, Ivory, *Hemissus* his pestilential Oyl, &c. or by concentrating, and also penetrating, such are acids, Citron Juice, Vinegar, Bezoardick Vinegar, &c. and these are most convenient in epidemical Diseases arising from great Putrefaction, as the Stench of Carcasses, the Fevers of child-bearing Women, &c. both to preserve and cure; so also in the biting of a mad Dog, of spiders, &c.

2. Or such as hinder the Blood to turn ichorous, resist too much resolution and rarefaction and therefore

fore respect the individual tye and conjunction of the Blood and Serum, whether they be *austere, rough Astringents*, as Tormentil, Bistort, &c. which are not convenient to those that are costive: or *mucilaginous*, as Harts-horn philosophically prepared, gelly of the same, root of Viper-grass, and its extract, &c. and of the terreous, terra sigillata, lemnia and Bole-Armenack: or *terreous absorbents and precipitatives of the resolving Ferment*, as burnt Harts-horn, Unicornu fossile, the oriental and occidental Bezoar, the Bezoardicks of Chymists, which certainly have not a peculiar alexipharmack vertue, but a power of absorbing and separating; therefore you must not always trust them: or *acids* which obtund the Sulphur of the Blood, as the acid Spirits, Clystus of Antimony sulphurated, volatile Spirit of Salt, of Niter, &c. or *opiates* which deserve, at least joyned with other things, to be accounted Bezoardicks; if rightly given, and in due time, they preserve the tye of the Blood and Serum: so that Treacle without Opium doth not cause Sweat, nor doth it answer the intent; and these as in other cases are excellent in the English Sweat, Epidemical malignant Disentery, and other malignant Diseases, where the Heat is great.

3. Or such as increase the Serum and its Motion, and hinder its coagulation, and (if I may so say) *incoction*. Such are, besides those mentioned before, those that make it fluxile, as saline things and nitrous things; as the volatile urinous, mercurials, native Cinnabar, and Cinnabar of Antimony, fixed diaphoretick Mercury, &c. Therefore note it as a Rule, where in malignant Fevers, the Serum is as it were coagulated, and so no Sweat can be obtained; but all are burnt up, then Cinnabarines

wisely joyned with Bezoardicks will most of all conduce to render it fluxile; but if the Blood is too much dissolved and inclined to be ichorous, they are to be shun'd; nor are they safe even in the convulsive Motions which follow; hence you may see the great difference in these things. *Or those that increase the Quantity, or restore the Substance and dilute the Serum*, as distilled Waters, Decoctions, Potions, Infusions, Emulsions, which are very good in malignant Diseases for that purpose; for, if you do not restore the Serum by good quantities of moisture, you do nothing, and sleep cannot be gained; but it is necessary, that from continued watchings, Phrensies, convulsive Motions, &c. should arise.

These are good, against Poisons in general, whether drank up or communicated, by fortifying the Heart, and preserving the Tone of the Blood; and in Pestilences, malignant Fevers, in the pestilential *Hungarian* Fever, in spotted Fevers, and those of child-bearing Women, in the Small-Pox and Measles, and such like contagious ill-natured Diseases.

Some alexipharmacks are *universal or common*, as resisting the universal Cause, in which all Poisons agree; some are *particular antidotes*, which are good against some particular Poisons, of which we shall say something. As to,

### *The Way of Applying them.*

Many things are to be said by way of Cautions.

1. *There is no alexipharmack, that is good against all Poisons in all Points.* So that you must not trust more to any, then may be truly proved by experience,



rience, the *polychrestons*, or general, are of three sorts, in a liquid form, as the *bezoardick Tincture*, which a good Physician must not want; in a middle form; as *Treacle*, *Mitridate*, and such like *Electuaries*; as *Orvietanum*, &c. and reject not proved things, for being slovenly made up of many Ingredients; in a solid form, as *bezoardick Powders*; but there must be great care in the exhibiting.

2. *A promiscuous use is not convenient*, so you must distinguish them, as to their force into volatile, middle and fixed, therefore 'tis wise to class them (as *Weiselius* did) into *absorbents* and *sudorifics*, otherwise you act doubtfully and empirically.

3. *There is more need of volatiles in the beginning*, to penetrate and discuss, and where the malignity is great, and Nature ceases to expel the Spots, Small-Pox, Measles, &c. and they strike in with difficulty of breathing, Anxieties, &c. but in the progress you may use more fixed things; where there is need of precipitation and alteration, and about the state and declination; but the prudent Physician is to consider. *Aqueous things* have themselves in a middle way, and are given with both the former.

4. *When the Blood of teeming Women, Infants and weak People is inclined to be ichorous, more temperate and mild things are convenient*; so that where *Treacle* is not convenient, *diascordium*, as being more temperate, has place; where the *bezoardick Tincture* has not place, tho it may be mitigated, there the *bezoardick Powder* may be given; for if you give them things, that are too volatile the rarefaction of the Blood will increase, and much harm is done.

5. *Venemousness is not take away by Sweat alone,* for the Serum is not to be destroyed overmuch. So that neither hot things alone, nor temperate things, nor only Sweat will suffice, which causes the vulgar to err, who think, that with Powder of Carduus benedictus, or Harts-horn the whole business may be effected, and so do Physicians err, that weary their Patients with continued Sweats: for all things are to be done according to the bent of Nature and Indications.

6. *Trust not overmuch to preparations of Serpents and Vipers, to the Bezoar stone, to the true Unicorn's-horn, &c.* The Salt of Vipers is very good among Volatiles, the Bezoar and Unicorns-horn among the fixed; but let a Physician scarce trust the Powder of Vipers; nor let him think with these alone to destroy this Lernean Hydra, viz. venosity.

7. *It is better to abstain from Medicaments suspected, or at least not use them alone,* as Nux vomica, roots of Leopards-bane, tho very useful for the Vertigo; for 'tis better to use the select and certain, than to run the hazard of the contrary.

8. *Alexipharmacks given before the beginning of sleep, are more efficacious;* yea sometime the Disease is thus crushed in the Egg, and taken off, which Helmont observes, and is agreeable to experience, but you must not soon sleep after them, for the Poison may then easily steal to the Heart,

9. *Volatiles are not convenient for cacochemical Bodies,* therefore when you must use them, interpose lenitives and balsamick evacuatives, if the malignity be great; but have a care, that you do not promiscuously confound all Humors.

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 BOOK II. SECT. II.
 

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## CHAP. II.

*Of special Antidotes.*

**T**Here are few *special Poisons* with us, they are either the bitings of venemous Beasts, as of a Spider, Viper, mad Dog, &c. or by error or treachery drank, or taken down at the Mouth, either out of vegetables or minerals.

In general observe, that when the special Poison is not known, you must make use of the general Antidotes; but if it be known, you must besides universals and strengtheners of the Heart, and the natural Heat, use appropriated Specificks.

You are also to note, that there are many lies spoken of Poisons, and Antidotes prescribed which were never seen, heard of, or prescribed, or used before.

Now there is a Question, *Whether every venemous Animal doth not carry his Antidote, and its flesh heal its biting?* I hold it not to be true in the general, for tho the fat of Vipers, as we know by experience, doth mitigate the bitten place; and so will  
Oyl

Oyl of Scorpions their biting, yet this is not to be extended to all, for tho 'tis true, that nothing profits, but may hurt, yet 'tis not so, that nothing hurts, but what also benefits. Therefore as to the Powder of Vipers and Serpents, we first say, that the bitings of Serpents are not so very hurtful, and scarce venomous. For a Serpent is a dull Animal, and if any one will venture, he may handle them, touch them, and kill them, without receiving any hurt, and their teeth are very small. But the Viper spreads its Poison more suddenly, its teeth are hooked, which is not found in Serpents, therefore they hurt the Membranes, and either with their cholerick Spittle, or acrimonious volatile Salt raise a preternatural fermentation.

Farther, that the flesh of Vipers and Serpents expel their Poison, is not universally to be trusted to, either for cure or preservation; 'tis better with diaphoreticks and alexiterials to hinder a putrefying Ferment and Afflux of Humors, least because of the caustick volatile Salt communicated with the Member and the Blood; the Part may be mortified and convulsive Motions arise.

Nor is the solemn supposition of the vulgar less false, who say, that if you take the Powder of a Serpent or Viper, you safely by the alone benefit of that Antidote, handle Serpents without receiving any harm: and some have sadly suffered by the experiment. But of this viperine Powder *Zwelffer, Clas. 14. append.* which you may look to at large, where he enquires of the special Constitution or Idiosyncrasie of some People, and of the boldness and cunning of some others, in handling the venomous Creatures. All harm is not taken away by these means, nor are they indeed altogether vain, tho of little effect; and you must prevent

vent the corruptive Ferment, more then regard the Wound, which nevertheless is not to be neglected; we have known illustrious Persons much hazarded by trusting to a viperine Powder, and in great danger till they used Bezoardicks; you may see an example in *Grulungius Cent. 1. obs. 1.*

Therefore I wish that vain Opinion may cease, and those, that take Vipers are wiser than Physicians, whom they deceive with false stories, for they secure themselves more by prudence than Antidotes; venomous Beasts are more venomous in *Spain, Italy, France, &c.* than with us.

As to vegetable Poisons, *Monks-hood* or *Wolfsbane* have the wholesome *Helmet flower* for an Antidote; *Hemilock* and *Henbane*, which hurt by their mucilaginousness, and immature fetid Sulphur, are corrected with Vinegar; and these are some of the chief Poisons among vegetables.

Note, that Vinegar doth correct most venomous vegetables, as *Monks-hood*, *deadly Night-shade*, (which besides other Symptomes hinders swallowing,) *Hellebore*, &c. a sure sign, that they hurt by a volatile Salt, and an undigested immature Sulphur entangled with much mucilage, so that being communicated with the Blood, or being yet in the Stomach they obstruct the Pores of the Nerves, and vellicate them, destroy the Crasis or Texture of the Blood, and so kill.

But chiefly *sublimated Mercury* and *Arsenick*, and other minerals that are kin to them, as *Cobaltum*, &c. belong to this place. These all act by a corrosive Quality, so that *treacle*, which is dedicated to the bitings of Animals, and invented to that purpose, will scarce do any great matters of it self against these Poisons. But they are as Antidotes which are *obtunding, asswaging and fat things*,  
as

as Butter, Oyl of Almonds, &c. those who by sublimated Mercury, and Orpiment try Treacle, line themselves with much Butter : or *precipitates* of mountain Crystal, and the like, which may do some good in slight cases, for they are vain, if great Doses of the Poisons be taken, and no vomiting passed before; nor is it easie here to find a proportion between the agent and patient; nor can Nature so well actuate the Antidote, when the Stomach is spoiled, and a fatal eschar or mortification induced.

Saturnine things taken, as Bullets, or the like, turn into a kind of Sugar, and by degrees are corroded, we have an example of this in the *German Ephemeris*, Anno III.

You may read of other Antidotes in Authors which have writ of Poisons, which indeed have all written out of one another, and sometime propose Poisons unknown and unusual; nor do they always mention contrary Remedies, but oppose the occult Poison with uncertain Remedies.

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 BOOK II. SECT. II.
 

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## CHAP. III.

*Of Diaphoreticks.*

**M**ost *diaphoreticks* are mentioned under alexipharmacks, therefore we will be the shorter; yet because 'tis a wide business, they deserve to be handled apart.

*Diaphoreticks* and *sudorificks* differ in degree, the first cause a transpiration of halituous matter, but *sudorificks* do that, and cause a sensible Sweat besides. As to

*Their Way of Acting*

They operate in dissolving the Blood, and procuring a separation of the Blood and Serum; that it may be expelled through the Skin in the form of Vapours; and that,

1. *Either by absorbing and destroying what doth tie and fix the Serum; or by resolving it, as the alkalines of a fixed nature, the terreous also, antimonium diaphoreticum, Shells, Harts-horn burnt, Bezoar, Bole-Armenack,*

Armeniack, Bezoardicum minerale, Joviale, &c. these do mightily precipitate the fermentation of the Humors, and promote insensible transpiration.

2. Or they make the Serum fluxile by rarefying it, and inducing a new fermentation into the Blood; such are. 1. The lixivial and nitrous, Salt of Wormwood, card. benedict. Centaury, which at the same time destroy Acids, and make the Blood fluxile. 2. Volatiles, as Spirit of Harts-horn, of Vipers, of Ivory, which powerfully cause Sweat. Or by affording an halituous vehicle and volatility, as 1. The aqueous, as destilled Waters and Decoctions, &c. which have some volatility. 2. The easily resolvable because of their watery and gummy Substance, as the rob (or thickned Juice) of Dwarf-Elder, of Elder, &c. but especially; 3. Those that have a volatile Salt intimately mixed with Sulphur, as the bitter and resinous, &c. thus Carduus benedictus, Opium, Camphire, Guaiacum, and of the Compounds, Treacle, Mithridate, and those above-named in the first Class, are the best sudorificks; these stir up the slow Motion or the Serum, move Nature to discuss what is superfluous, the Pores are opened, and the Blood vigorized.

And these are proper in all Influxes of the Blood and Serum, in Inflammations of the Pleura, Defluxions, upon the Joynts, &c. therefore they are good in the Pleurisie, which is often subdued by one eminent sudorifick, in the Joynt-Gout, which is most of all helped with such Sweats, in Tumors of the Groins, of the Tonsils, Arm-pits, and the like, in Lipothymies, Faintings, Syncopes both hysterical and otherwise, and upon the ceasing of the expulsion of the Small-Pox, and Fever spots of all kinds, &c.

3. Or



3. Or by inciding and dividing the Serum, that is, coagulating, and by this also promoting the fermentation. Acids do chiefly perform this, and alkalines also, after their manner; thus Vinegar, as well as other Acids are added to sudorificks, 'tis no slight observation, that sulphureous Medicaments work more readily by the addition of Acids, and do more procure Sweat, than when alone: let the *simple mixture* be an example; for neither the Treacle-Water of it self, nor the Spirit of Tartar do so readily cause Sweat, as when joyned with Spirit of Vitriol, which doth wonderfully help their activity; so the bezoardick Tinctures without Spirit of Salt, or some other Acid are not so apt to cause Sweat.

For the Blood being coagulated, grows more gross, viscid, thick and glutinous; but Acids hinder this in taming the Sulphur, and hindering as much as lies in them, its rarefaction and promote a secretion of the serous Humor, and by that means make it more capable to evaporate.

Therefore *these*, and *diaphoreticks* of the first Class are convenient in many Fevers both continued, and intermitting according as they are indicated, but especially in the Pox, Scurvy, Elephantiasie, and such like, where the more glutinous Blood does cause the greatest Symptoms and heaviness, and pain of the Limbs. Those of this Class do mostly take away the grumousness of the Blood, so that the *simple mixture* is not to be despised in palpitations of the Heart, in the Itch and many other Cases. In a word: in all cases where the Quality and Motion of the Blood is vitiated by excess, Ebullitions, Despumations, &c. diaphoreticks are all in all, they restore and depress the Ferment. As to

The

*The Way of Applying them,*

Many things may be refer'd hither from what has been said elsewhere, but that all may appear the better we will add somewhat here apart.

1. *Internal Sudorifick Impellents want external helps,* for 'tis not enough to take a diaphoretick unless you also keep the Pores open by external warmth, Cloths, &c. which also thin the Humors; but these do rather as secundaries bring the energy of the internal into act; so that,

2. *Externals alone will not do the business,* unless it be that the matter sticks in the intercutaneous spaces; for in that case external Impellents do profit more, so they are of use, when a particular Tumor siezes some Member. To this place appertain the use of Baths, Hot-houses, Stoves, &c. as well universal; or particular to some part, as fomentations, &c.

3. *Where expulsion is wanted sudorificks are best,* for they are not good only in repletion of Humors, and impurities of the Blood, but they rowse sluggish and stagnating Humors, and make them agile and lively: but they are chiefly for resolving and attenuating serous Humors, and sending them out by the Pores. So that,

4. *The volatility and fixity of the Medicaments, and the diverse state of the Blood varies their use.* Some use always antimonium diaphoreticum; some extol Spirit of Harts-horn; some use in all cases the bezoardick Tincture, especially if camphorated. All these do err, especially the last, for all cannot bear such a rarefaction, as will be caused by Camphire, at least in a good Dose, Camphire is a mighty thing to vigorize the Motion of the Blood, but

but not good where 'tis rarefied and boyling, for hence watchings, thirst and heat, will follow; therefore abstain from the bezoardick Tincture so camphorated, or else have a mild one in readiness.

5. *Therefore where there is a loss of strength, and the Blood doth rather want a check than a spur, the more temperate are only proper, but otherwise other things.* Thus Hoffman observes, that in an epidemical Fever, with colliquatives Sweats almost only Bole-Armenack, and terra sigillata did good; but how silly would he be, that would give them to promote the Motion, and Fermentation of the Blood.

6. *Where precipitation is more necessary than diffusion, the sick Persons are not much to be compelled to Sweat: and indeed a forced Sweat does little good even in continued Fevers.* Therefore they err greatly, who in Tertians and Quartans give their sweating Powders before the Fits, and almost force sweatings, and that continually; hence Consumptions, and many ill Symptomes follow, as we have observed; and 'tis never prudent in expelling of the Small-Pox, and malignant Fevers to force to Sweat violently: for so the Serum is too much wasted, and the Blood boils the more, and the good endeavours of Nature unseasonably precipitated; hence 'tis better to continue a breathing Sweat, or good transpiration, than strongly to force Sweats; 'tis better follow or lead Nature, than drive it, and what Sweat doth not perform; may be done by gentle breathings.

7. *They are not convenient when the Serum is deficient, nor yet, when it exceeds; for they exhaust the deficient Serum, and are dulled and drowned in the excessive; hence in Mad-men and cholerick People all temperate things must be used; or at*

least things well diluted with such aqueous Vehicles as substantially moisten and increase the Serum. This holds good of all dry People in general; so diureticks and purgers are better for the hydropical.

8. *They scarce have place when the first ways are stuffed with visious Humors which stick to them, nor in phlegmatick Distempers, for vomitories and purgers are better, but when the gross Humors are evacuated, the thinner may be carried off by diaphoreticks; thus in Fevers diaphoreticks are excellent, but in intermitting Fevers, that is carefully to be observed, especially in quotidian: so in the Itch also and Cachexies lest they more coagulate the Phlegm and the Serum, trouble the Humors, and increase the Impurities of the Blood, which they should take away.*

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## BOOK II. SECT. II.

## CHAP. IV.

Of *Carminatives*.

**W**hen we consider, that all Wind proceeds from a weak Heat, a watery or acid Humour, cold and viscid or Phlegm raised into Vapours; and if we do well consider the Nature of *carminatives* we may find out their Way of Acting.

They are called *carminatives* which disperse Wind, they are not much different from diaphoreticks, in that they disperse and resolve; so that many diaphoreticks are *carminatives*, as the *Carline* thistle, *Zedoary*, *Antimonium diaphoreticum*, &c. being by this more excellent in that they resolve, and by Sweat or transpiration dispel.

And they are either *halituous* rarefiers, which by their subtile attenuating and volatile Faculty do warm and correct Phlegm both insipid and acid, but chiefly the last. Such are especially *oxy volatiles*, or that have a balsamick Sulphur, that is subtile joined with volatile Salt, which restore decay'd Heat, by their penetrating halituous virtue,

R 2

and

and discufs, and cause an exploſion of the generated thick Vapors, as the four carminative Seeds, all aromatics, eſpecially Zedoary and Galingal roots, and their deſtilled Oyls, as *oleum carminativum Myſiſſi*; or volatile Acids, as Spirit of Salt, ſweet Spirit of Salt, which we have obſerved to take away Colicks (according to *Croſſus* his preſcription) like any charm.

Such oyl volatile, that have an oyl volatile Sulphur are alſo Pain-allayers, Nervines and Afſwagers: ſo that at the ſame time, that the Membranes are diſtended by Wind they comfort them alſo, and eaſe them.

Theſe are good both internally and externally in many Diſtempers, as the Colick, Vertigo, fits of the Mother, after Labour, where eſpecially Zedoary and Galingal roots are convenient, in Wind of the Womb, windy Ruptures, where by our experiment, and *Helmont's* the four greater Carminatives, hot feeds are excellent; in noiſes of the Ears, &c.

Or *abſorbents and qualiſiers*, which do not only deſtroy the acid Humors and dry them, and precipitate the Vapours thence ariſing; but alſo, if rarefied Choler ſhould concur, they tame it; and in a word, they deſtroy the ſeminal Ferment of thoſe foul Guſts; yea, if there be an exceſſive heat joyned with them, and ſo a burning of the Bowels; as in the hypochondriacal; ſuch are *terreous precipitants* and diaphoreticks, as chiefly Antimonium diaphoreticum, Shell prepared, Crabs-eyes, &c. and more eſpecially *ſaline, nitrous*, and alſo *alkaline* things, as Nitrum antimoniatum, Arcanum duplicatum, Tartar vitriolated, Aurum fulminans, Tincture of Tartar, &c. yea *mineral Waters* alſo, and thoſe that have ſome ſharpneſs, as the Clyſtus of Antimony.

Theſe

These are most proper in a bilious Colick, hypochondriacal Winds, the Tympany, Fevers, palpitation of the Heart, Vertigo, and the like.

Note, that these may be mingled when you would precipitate, and allwage pain; as in heart-pains, where we have often given Oyl of Cloves, with prepared Shells in a dry form, with the carminative Essence, and the Essence of Castor in a Liquid form with great success.

Or those, that confirm Concoction, the Heat, and altered Menstruum of the Stomach; such are precipitates and cutting things, as Wake-robin root, Ginger, &c. Aromaticks, and other balsamicks; for as in all windy Distempers, the Stomach is to be regarded, because they arise out of its frustrated Actions, so stomachicals must be reckoned among carminatives; these are best for Hiccoughs, Belchings, Pains at the Heart, inflation after Meat, &c. As to,

### *The Way of Applying them.*

You are to note the following Axioms,

1. You must not in all flatulencies use the most rennious and hot things, especially in the hypochondriacal, with whom more temperate do best agree, which may qualifie the saline and nitro-sulphurous Particles which cause the burning of the Bowels: so that in this case qualifiers and coolers may be good against Wind, as they restore the natural Heat.

2. Therefore you must have a proportion of Acting in these, as in other things. So as not to use hot things in hot cases, nor temperate things in cold phlegmatick cases; and make a difference in thick and thin Vapours.

R 3

3. So

3. So that in flatulent Pains, as Colicks, you must not presently fall to discutients, that are very strong, for some are stronger, some more temperate. For as, according to *Galen*, the common indication of all inflations is, that what is preternatural should be evacuated; so indeed the next is to discuss and dissolve; but this cannot be performed at all times alike; for

4. They are not convenient, (1) Where the Matter abounds: for so carminatives by attenuating the cold and gross Humors, and raising more Vapours do often cause intollerable pains, see *Lud. Sepralius lib. 7. animadvers. 66. & 67.*

5. They are not convenient, (2) where there is a dryness of the Bowels, and dry Ordure causes obstruction: for in both cases, if there be not a depletion of the Matter, all are to no purpose, yea indeed to bad; *Crato* is very elegant in this matter, when he says, that some do hasten overmuch to discuss Wind by carminatives in the Colick, which would do well in a light one, but not in a vehement one, in which they hurt, as a certain Doctor was like to be destroyed by such means, and was truly brought to a weak condition.

6. As many Diseases happen from Wind especially the thin ones: so in the cure you must mainly regard their discussion: thus a windy Pleurisie, Anxieties of the Breast, compressions of the Midriff, the flatulent Asthma, and others happen very often from Wind; so that it would be very vain, to cure them after the same manner, as they do Symptoms of one and the same cause.

7. Discussants are conveniently given in Clysters, by which you kill two Birds with one stone, that is mollifie and expel the Ordure and discuss the Wind, and destilled Oyls moderately mixed among them do much good.

8. As



8. *As the productive causes of Wind do vary so also does the cure*, whether from an external error; or from an internal cause, and the faculty it self hurt. Thus Roots and Pot-herbs abounding in excrementitious moisture, Apples, Pears, Cherries, Melons, sweet things, fat things, gross, slimy and feculent things, &c. do cause Wind, and here you must obviate Crudities by precipitating with Acids, with Aromatics, &c. as the case requires.

## BOOK. II. SECT. II.

## CHAP. V.

*Of Destroyers of Worms.*

**W**orms, and the Matter that breeds them are altogether unnatural, and *Anthelminticks*, (or Worm-killers) do not only destroy them, but the vitious Humors, that change from a natural state.

And this they do chiefly (1.) *By killing them*, and *resisting putredinousness*, for whether they be generated equivocally out of putrid Humors, or from seminal Particles or Eggs; yet this is certain, that they are cherished and nourished by putredinousness.

Such Medicaments are, (1.) *Bitter things*, and *balsamick Medicaments*, these defend the Body from putrilage, and are therefore the chief things. *All bitter things are Worm-killers*, as Myrrh, Aloes, Wormwood, Scordium, Centaury, Rhubarb, a Bulls-gall, Tansey, &c. and of the compounds Elixir proprietatis, and Pil. Rufi, &c.

As

As also, (2.) *Acids*, which are all *Worm-killers*, not only Vinegar, but also acid Spirits, of Vitriol, Salt, Niter, &c. not only because they resist putrefaction, but they spoil their Motion and Heat. They are chiefly of internal use, thus have we known the vitriolated Tincture of Violets cure a Child, that was tormented even to death. So *nitrous things* kill *Worms*, both because of their bitterness, and the acid Salt, that lurks in them; thus Shirts strowed with Gun-powder do kill Lice.

So, (3.) *acrimonious, pungent and biting things*, that either have a *volatile Salt* alone, or an *oily volatile Salt*. So Garlick, as 'tis commonly said, is famous against the Worm of the Heart; and Camphire only carried about, keeps one from being louse: which Amulet is convenient for Souldiers, Travellers, &c. so Spirit of Harts-horn, and its volatile Salt doth powerfully kill Worms, nor do these expel the Worms only by irritating them, but they kill them by their great penetration, and as contrary to their life and putrefaction.

So, (4.) *terreous things, alkaline and lixivial Salts* do kill Worms, as sea Moss (or corallina,) which Empiricks throw upon Earth-worms, and kill them. Harts-horn burnt, Salt of Wormwood and Carduus benedictus, tho they do it not so powerfully, yet are of this Class.

(5.) *Aqueous things*, which are more proper for Vehicles, unless they are mercurial.

All which destroy Worms and oppose them, and even annihilate them.

Or, 2. *By choking them*, by hindering transpiration in which the life of Worms consists, as oily, and fat things, which obstruct the Pores, and hinder ventilation, and so do as it were suffocate them,

as

as Oyl of Olives, sweet Almond, &c. tho these are but weak, and hardly to be trusted, yet they have a good use, that other things may operate the better by their means. Hence it is, that anointing with Oyl of Olives externally doth kill the broad Worms, and that fat things properly so called ( for they delight in fat Broaths and Decoctions ) and not Oyls, are given in Clysters to invite them downward; for they avoid Oyls, and these would rather repel them; But if they are penetrating, Aereal Oyls, then they are most destructive to Worms, as chiefly the Oyl of Tansey, Spike and Amber.

Or, 3. *By dissolving and destroying*, these resolve their glutinous and slimy substance, corrupt and even annihilate them, and are as poison to them by their Acrimony, and such are mercurials. Nothing under the Sun is a greater enemy to Worms and their Race, for they consume their Nutriment, and destroy them, as it were, by an Idea, as 'tis apparent in the decoction of crude Mercury; the Crude of it self slips off too fast, therefore mix it well with double the quantity of Sugar in a glass Mortar; so Mercurius dulcis is excellent in this case; yea plain Water in which Mercury has been boyled, tho it loses nothing in the boyling, is very powerful, which is *Helmont's* experiment.

But note, that *Glauber* condemneth the agitation of Quick-silver with Water or Beer, and that he never saw any good effect from it, or Mercurius dulcis, but the virtue cannot be denyed, only this may be confessed, that they more readily kill, than expel the Worms.

So Cinnabarines kill Worms, so that some, tho sillily, have affirmed, that Cinnabar of Antimony, if it had any virtue in the Epilepsie, it was only

only in the Sympathetick Epilepsie, which proceeds from Worms.

Or, 4. *By expelling them by purgers*, for 'tis certain, that all Purgers are Worm-killers, chiefly the Cholagogues. These not only mischief the Worms, as they are bitter, acrimonious and resinous; but also as evacuatives, and irritating towards expulsion; so that these are most noble to clear the Body of those troublesome Animals, as chiefly Aloes, colocintida or Trochisc. alhandal, Rhubarb, Ipec. diaturbith with Rhubarb, which *Heerius* says are most approved, so that if there be any example of great Worms, that have been evacuated all, or most was performed by Purgers.

There are two other things numbred by some Authors of no small note; yet you must hardly trust those things.

1. *Sweet things*, which tho they may kill the Worms by accident and repletion; yet this does not hinder their new production. So some give Raisins to Children, as *Sennertus* in his *Praxis* says, that the decoction of *Sebestens* is most experimentally efficacious, if it be given every day before Meat. So others say, that sweet things, as Honey, &c. are good against Worms, because they breed Choler, but we have said elsewhere, that sweet things do not so much breed Choler, as they are commonly discoursed of. So that sweet things do not expel Worms, but by deceiving them, that being enticed thereby they may therewith suck their Poison, and so be destroyed.

2. *Earth-worms*, which are said to expel all Worms, if they be dyed, and given inwardly, which may be deduced from a contrary slimyness to that of the Body-Worms which stop their Pores,  
and

and from their volatile Salt; notwithstanding, that we may not mention the insufficiency of Experiments in this case; even the *Worms themselves*, treated after the same manner, give us no certainty, seeing the Experience of several Authors tells us, that their seed is thus propagated, of which see *Finkius enchir. dogm. Herm. cap. 23, p. 120. Tabernam. in herbar. lib. 1. cap. 5. Senn. l. 3. prax. parte. 2. sect. 1. cap. 3. Heerius observ. 9. Kergerus de ferment. sect. 1. cap. 6. pag. 56, &c.* tho indeed this Powder hath sometimes been given, and many Worms expelled after it; so that some Quacks think it the most powerful Remedy.

You must always include those of a middle sort, or things mixed of other things, thus the Italians have a thing easily gotten, and not to be contemned, that is a lixivium beaten together with Oyl of Olives, which they give with good success. As to

### *The Way of Applying them.*

Presupposing them to be indicated by the presence of such a living Breed, you are to note,

1. *That Worms are not only to be killed, but also expelled:* for they may, and do much harm sometimes by putrefying in the Body. Hence Worm-killers are either slow, or active which kill, and expel them.

2. *You must mix anthelminticks (or Worm-killers) with sweet things,* thus they are wonderfully enticed downward by a Clyster of Milk. So they may be given with warm Milk very conveniently, that they may suck their Poison with this sweet Vehicle; so Worm-seed is well given with Bread and Honey, for they, as other things, avoid what they hate, or is bad for them. So also the philosophick  
Spirit

Spirit of Vitriol is mixed with Sugar for the same purpose.

3. Give them upon an empty stomach, and eat nothing afterward for some time; for they will neglect the ungrateful Medicament, for the ungrateful Aliment, and so you'll fail of your end: this doth chiefly hold good, as to the common Worms; for they are soon killed, and so it doth also as the great, and very long Worms which are called *Tania*.

4. *Mercurials* want a stimulative, and are not given to Infants with great safety. We have spoke of the first; of the other *Glauber* says, that *Mercurius dulcis* being given to Infants from gr. x. to xxx. doth for the most part (unless they are very strong) cause a weakness of their Limbs. For all Parts, as the Bones, Nerves, and others are then fluxile and lax, but Mercury is an enemy to those Parts, and so it easily doth hurt to Children.

5. They are to be sometimes changed, least the Worms be accustomed to them, especially in a grievous case, when a large brood of them stick to the Guts, and other things have failed before.

6. *Topicks* are to be applyed to the Navel, and not to the Stomach, unless the Worms lye near it; not only because the Navel is more perspirable, but because it is the Center of the Belly, and therefore the more likely to reach the Worms by their virtue; tho these externals are but subsidiary means.

7. The *Ascarides* are to be cured more by Baths, Suppositories and Clysters, they are sometimes very familiar both to Men and Children, and are like Cheese-Worms, they seem to be a swarm or seminal brood of Worms. It is a remote way to cure them

them by the Mouth, seeing they lie near the Fundament, and therefore use Clysters, &c.

8. *Anthelminthicks* are not universal helps. As to the hypothesis of *Langius* and *Kampmannus*, who hold a verminous putrefaction to be the cause of all Diseases, Pains, &c. of which the last Author has an Epistle to *Faber*, and his *pathologia animalis*: tho we cannot deny, but Worms are frequent in many Distempers; yet we cannot allow them to be the causes of all Diseases, for it would be very inconvenient.

9. The use of anthelminthicks extends to all preternatural Animals, that afflict the Body. So Lice and Nits may be killed by them, as chiefly with Hellebore, Camphire, Staves-acre. So the same are good after one has swallowed the seed of Toads and Serpents, which sometime happens, tho but seldom, we shall not mention the Worms of Ulcers and the Lotions, Oyntments, &c. due to them.



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 BOOK II. SECT. II.
 

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## CHAP. VI.

*Of Dissolvers of grumousness and congealed Blood.*

**L** *Ithontripticks* under nephriticks differ only in name from these, therefore we will be very short ; but that we may not leave them untouched, we will here by the by say something, and repeat the Rule of *Hercul. Saxon.* who says that the same things as mollifie the Stone, do attenuate Clods of Blood.

These *Dissolvers of clotted Blood*, are middle things between diaphoreticks and diureticks, and participate of both.

They respect, 1. *Extravasated Blood* thrown by an interrupted circulation out of its due Chanals.  
2. *Blood near a coagulation*: the Energy of these dissolvents or dissipaters doth respect,

*Either Blood hindered in its motion and circulation*, whether it fall of it self into a certain weaker place, as in Inflammations : or is by ruption of the Vessels by some external injury grathered some where.

And

And such are all diaphoreticks, as you may find by what is said before, as well the *volatile*, which by their tenuity make the Blood more fluxile, by subtilising and rarefying of it, and so increasing its motion; as *balsamicks*, Myrrh, Zedoary; as fixed, such is Antimonium diaphoreticum; so that the bezoardick Tincture, Spirit of Harts-horn, the simple mixture, Antimonium diaphoreticum, Zedoary, Opium, &c. are the best things in that case.

And these are good, as well in the first case in all Inflammations, as of the Pleura, Liver, &c. in green Wounds, Bruises, Falls, Abscesses, &c. as they hinder coagulation and concretion, and as it were crush it in the Egg, for the circulation being put into order, you are not to fear any such gathering together of the Blood.

As the *actual coagulation*, or the thing concreted into a consistence, to which the resolvents under nephriticks do appertain; whether they be *sulphureous*, as sperma ceti, which is excellent, (however *Langius* contradicts it,) and doth good upon that account in an Asthma; or *saline* as well acids, as Vinegar, Vinegar of Squills, Oxymel of Squills, Juice of Limons, Spirit of Vitriol; yea *Hippocrates* himself commends Vinegar in this case. Therefore let our supposition stand immoveable, that *acids dissolve coagulated Blood*, not that Acids are good in the first case, when the coagulation is only as yet like to be, unless they be under the dominion of volatiles, for otherwise they promote coagulation; but in the other cases, when the extravasation is done, and the Blood already coagulated, (so that the distinction must be between coagulation done, or to be done,) *Alkalines*, as Crabs-eyes and other diureticks and lithontripticks, and those

those Plants which are vulneraries, because of their alkaline Nature, their Juice, Decoctions, Essences, &c. are convenient.

Hence it appears, as *Helmont* affirms, why they are Specifick in the Pleurisie which dissolve clotted Blood, that so the matter may be fit for expectoration.

These are good after Falls, Bruises, &c. thus the Powder of the *Augustans* is famous for falls. So Goats-blood also, that we may say nothing of Crabs-eyes, is antipleuritick, resolves clotted Blood, and the Stone, chiefly because of its volatile Salt.

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 BOOK II. SECT. II.
 

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## CHAP. VII.

*Of Diureticks.*

**V**E happened to speak of diureticks before, therefore we will only add some thing more as to *their way of Acting and Matter.*

Presuppose, that *Urine consists.* 1. *Of a serous part.* 2. *A saline, and what is mingled with them.* 3. *That for its excretion 'tis requisite, that the Passages and the Arteries be in right tune.* Hence diureticks do in general respect the fusion of the Blood, but in particular they act,

Either by *cleansing*, as, 1. *The aqueous and liquid*; for you know much drink will cause Urine, so that *all are diureticks which are aqueous, and substantially increase the Serum*, and by great use and secretion they provoke much Urine, especially if not crude; and not altogether bereaved of a saline stimulative; hence Wine is said to be diuretick, Whey, mineral Waters, Baths, which have the Salt explicated. So aqueous things are the Vehicles,

cles, and have the chief place where the Serum is defective, as in Fevers, or when it stagnates, or where being coagulated it wants absterſion, and a Vehicle; ſo that in the Stone, and ſuppreſſion of Urine, 'tis not meer drivers forward, but thoſe alſo, that afford ſuch a Vehicle, are convenient; that by means of this laſt the Stone may paſs through the Ureters, and be carried out.

Or, 2. *The wateriſh, mucilaginous, and other temperate things*, either alone, or joined with terreous Parts with much of ſaline virtue, as Maſh-mallow roots, Mallows, Liquorice, Sowthiſtle root, Caſſia, Strawberries, the four greater cold ſeeds, &c. and Emulſions, Waters, Powders, and ſuch like prepared, and made of thoſe things; theſe allay Acrimony, they eaſe and aſſuage pain, as in the Strangury, the Stone, Obſtructions of the Bowels, &c. they do much good.

Nor doth it make againſt us, *that theſe are improperly called cold*, for in reſpect of other things, they may well be called and diſtinguiſhed ſo, for this is certain; 1. *That hot things, volatile things, do often want theſe as a Vehicle*, and without them do injuriouſly ſtimulate the Kidneys. 2. *They are powerful enough by their abſterſion, and improving the uſe of the Kidneys by the cuſtom of them.* Scaliger touches upon this matter, and truly ſays, that all fiery Humids do not provoke Urin: ſo Sowthiſtle root, as he ſays, doth wonderfully provoke Urine: ſo decoction of Noli me tangere (or coddled aſſ-mart) doth ſo cauſe Urin, that it may cauſe a Diabetes; as *Camerarius* and *Gefner* atteſt: ſo have we obſerved a Diabetes cauſed by the Juice of Birch, which was fatal by the reſolution of the Blood. 3. *So that this way of cauſing Urin is moſt convenient to Nature.* 4. Only noting this, where

the Serum doth most of all stagnate (as in Dropsies and Cachexies) they are not so convenient.

Or, By Stimulating and causing a precipitation and fusion in the Blood, So that not only Galen, but Hippocrates says, that the acrimonious, and pungent things, and those which heat cause Urin; or those which are soon hot, and being so, melt, do cause a sudden separation; but the Chymists assert, that they precipitate the Blood, and the serous Part is separated from it, as Whey from Milk; so that they are diureticks, which are such, as coagulate Milk, and so in causing a fusion in the Blood, they cause much Urin; see *Willis de fermentat. cap. II. p. 84.* in a word, they make the Serum more fluxile, and so promote its Secretion in the Kidneys, and that is done,

As well by *salines* and *mercurials*, as *volatile Salts*, chiefly the volatile Salt of Amber, urinous Spirits, the volatile Salt of Tartar and others, whence you may see the agreement of diaphoreticks and diureticks; or fixed of all kinds, or *alkaline Salts*; so lixivials are very diuretick, as lixivium benedictum Mynsichti, Salt of rest Harrow, Salt of Toads, Tincture of Tartar, of Flints, &c.

And indeed Salt is the chief diuretick, as Chymists do well affirm; to this place appertain Cantharides, which have an acrimonious caustick Salt, by which means they are such great diureticks, and mightily stimulate the Kidneys and Bladder; yea sometime erode them, and cause bloody Urin: hither refer all Plants, that have a resolving saline mercurial force, as China root. Or *terreous alkalines*, as Crabs-eyes, the chief among diureticks, the nephritick Stone, and other lithontripecticks; or *acids*, as the acid Spirits of Sea Salt, Vitriol, &c. and these correct and dissolve the coagulating

lating Serum, so that it is of these in general, that we said (among other things) *that whatsoever did liquify Phlegm did cause Urin*; for the Phlegm it self is nothing else, but coagulated Serum; but *nitrous things* do this most of all, as Sal prunellæ, arcan. duph. Mynf. &c. or a middle sort, as Tartar vitriolated; for as Urin participates of all these, so 'tis promoted by them all.

As also *sulphureous things*, which have much of oily volatile Salt, for these get into the Blood very nimble, open and penetrate by their tenuity, stimulate the Kidneys by their heat, and by their saline virtue cause abundant Urin, and the Urin has a violent scent from the Salt resolved and expanded; all simples participating of this principle belong to this place; chiefly all *turpentine*s; in substance, as in Pills; in beastings, or with Waters, Oyl and Spirits have an attenuating and secretive force.

So *oily things* tho immerfed in terreous Particles, as Acorns, Date-stones, Peach-stones, &c. belong to this place.

Or lastly *by opening the Passages and resolving*; and that either *of themselves*, as (besides those in the first Class,) all opening things and deoppilatives; so that as it is certain, that *diureticks are the best openers*; so on the other side *openers are the best diureticks*. And this the *aqueous, saline and oily* joined together, do perform by relaxing and opening the Pores, and qualifying eroded Parts: or by *accident*, as purgers have a great diuretick virtue, not only because they cause a Fusion in the Blood; and so by reason of their saline stimulative virtue are highly convenient to be joined with Purgers; but also because of the consent of the right Gut and the Bladder: for the sphincter of one being

opened, the other sluice is certainly opened; and hence Urin is promoted, of which *Langius misc. cur. tit. 6. p. 16.* speaks very well.

And these have place chiefly, when the Urin stays in the Bladder, and to send the Serum out of the Vessels, that it may be carried out by its proper Chanals and Remora's be removed, that all may be set aright in a natural state.

## BOOK II. SECT. II.

### CHAP. VIII.

#### *Of Emmenagogues.*

**A**S they are universals which evacuate by sweat, siege, Urin and Vomiting in both Sexes; so there is a special way of evacuating in Women by the Menfes; and has its proper evacuatives, on which their health in some measure depends.

But seeing, that only two generals are here to be observed, *the Humor it self*, which flows, (or the Blood) and *the Passages by which it flows*, not neglecting the Archeus which measures the Motions of the Heavens by this lunary tribute: therefore,

• They



They respect either the *ways*, which should be free in the Microcosmical republick; such are all aperitives taken in large Doses, except the acid, and nitrous, which are contrary to another intention, unless they be given under the dominion of other things to help their action: so that hitherto appertains out of spleneticks, all *cutting, attenuating and opening things*; chiefly *Infusions, Decoctions, Potions*, to render the Humors fluxile: therefore the opening roots in decoctions, and other *supplying things* externally, as *baths*, which by their kind warmth and moistening faculty do open very much, belong to this place; and what tenuity of Parts does internally, these eminently perform externally. So also *fumigations*, and such as draw away the slimy filth, do free the Pores, and open them; and have place in barrenness, defect of the Menfes, Palenesses, Restagnations and the Symptomes that follow them; as *Timeus* in his Counsels advises to take the fumigation of a coliquintida Apple into the Womb, which doth well succeed; especially after bathing. So that Emmenagogues are nothing else but specifick uterine aperitives.

Or they respect *the Blood it self*; for as the Blood is, so are Menfes, and as the Menfes are, so is the health. For as to the eruption of the Mentes there is some stir of the Blood required, or repletion or fermentation by which it seeks a passage, which in due time it acquires: so Emmenagogues are those that respect the indisposed Blood, in general by promoting its motion, but chiefly in particular, by two respects; for they,

Either, (1.) *Do remove the Impediments, which as it were fix and coagulate the Blood*, and these Impediments are two, *acid and phlegmatick Humors*,

122 UMI S 4 Suck

Such are *steel Medicines*, Crocus martis, aperitives, with the Salts, *Quercetan's*, cachectical Powder, and his stomach Powder : yea some use the filings of Steel and Gold for the same purpose, to take away constringent Acids : but those steel Medicines are best, that are also moistening, as tinctura martis pomata and cydoniata, which have an excellent force against this Distemper. So also Tinctura martis tartarea, and the like ; that care may be had of the dryness and fermentation ; and others which resolve, liquifie and attenuate the Serum, when 'tis coagulating ; as bitter things, and those that have tenuious Parts, as Ditany, Lovage, Mugwort, Chervil, Feverfew, &c.

Or, ( 2 ) *They promote its rarefaction and stimulate*, that it may be more active by its sulphureous and saline Parts being stirred and exalted, and so its slow clammyness being destroyed, it may acquire more space and motion ; these are *balsamicks, volatiles, and between both*. As the sulphureous, Saffron, Myrrh, Bay-berries, Savin, which mightily promote the Menfes, and distilled Oyls of Savin, Cinnamon, Bawn, Saffron, &c. Or the saline, fixed and volatile as Tincture of Tartar, Borax, Salt of Mugwort simple and vitriolated, &c. Spirit of salt Armoniack ( whose external use being injected into the Womb, by some instrument, Glauber doth much commend ) Spirits of Hartshorn, the volatile Salt of Amber, tinctura bezmich. which by its volatility doth often promote the Menfes ; hence we have a practical rule adapted to both intentions. *Those which provoke Urin, do for the most part move the Menfes.*

Or, ( 3 ) *Stimulate, and free both Humors and Passages*. Such are purgers, as they respect, not only the antecedent cause, slimy and clammy Humors ;

mors; which they attenuate and carry out, but also help the rarefactions and fermentation of the Blood; so that it often falls out, that the same day they are taken in, the Menfes flow; among these Aloes excels, as *Hoffman* says, that he had a Servant who could promote the Menfes no other way, than by the use of pilule Ruffi which are made of Aloes, Saffron and Myrrh. So in the most stubborn Obstructions of the Menfes, the electuary of hiera to ʒi, with ʒi. of Saffron has had great success. These indeed do happily answer both intentions, and 'tis highly convenient to mix aperitives with laxatives.

Or, (4.) they restore and refresh the Blood, and so make it fluxile, such are analepticks, or good nourishers plentifully used, for 'tis absurd to promote the Motion of the Blood, if the quantity fails. Those Women that have plenty of thin ferous Blood apt to turgency do constantly gather a plenitude, which at certain times, (as Nature dictates) they evacuate, so that you always must have regard to the quantity of the Blood. As to,

### *The Way of Applying them,*

Many things worth observation do occur.

1. *When the indication of moving the Menfes ceases, there Emmenagogues are vain*, for the indicant ceasing, the Remedy ceases; they are not indicated either by reason of Age, for they would be vain to Children under 10, 11 or 12 years old; or in respect of their peculiar Temper, when there is no inclination of Nature that way, which seldom happens; yet I have observed it in some, which did marry, but were barren: or in respect of the defect of Blood, as in, or after chronical Distempers, &c.

2. *They*

2. *They are not to be given to teeming Women*, for several reasons, nor to Harlots, who pretend an obstruction of the Menfes, when indeed they are with Child, and a Decoction of Savin, and such like, are vain, unless there be some inclination to Abortion, yea, and purgers too; besides it is against conscience; nor are you in a dubious case to go farther than steel Medicines and moderate openers. You are not to give over-hot things to teeming Women lest they over-rarefie the Blood for as teeming Women by a rarefaction and fermentation of the Blood, and hot Fevers do miscarry; so you must look, that you do not cause the same effect by your Medicaments, which is also the reason, that purgers are not convenient for them.

3. *Unless they be given in due time they have no effect*, for in this case you must follow the inclinations of Nature by helping it, and removing Impediments when the Archeus directs the Motion. In this case, as to time, two things are to be noted in practice; for they have either flown before, or not; if *this last*, then choose the time of the conjunction of the Sun and Moon, for the Moon has a considerable influence upon Humors, as being Mistress of them, and makes upon the new Moon a flux in the microcosmical ocean of Humane Blood. As to these times you may read *Rulandus* in his *pract. empir. cap. 1. pag. 152.* but in the first case a Physician must enquire the time that they usually flow: for it holds good in this, as well as other things in Physick, *That to give Medicaments in a proper time is highly convenient.*

4. *It is not aperitives alone, nor drivers out, that will always do the business*, we have seen People err very much as to this, who gave Emmenagogues, yea distilled Oyls of Juniper, Savin, &c. Spirit of salt

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Armoniack, and such like, without ceasing; thinking them specificks as being approved by Authors; when indeed those are to be accounted as such, which answer a more special indication.

5. *It is best therefore, to premise aperitives, and to subjoin drivers out, both internally and externally.* It is therefore a good project, for a Week or two before the ordinary time to give aperitives, moisteners, digestives and preparatives. Yea purging and letting of Blood, on which the hinge of the whole business turns, is not to be done at another time, otherwise they will be vain and ineffectual.

6. *Those which move the Menses help the birth,* yet not so much general aperitives, as special and rarefiers. That we may speak distinctly of them, they operate, either *as they comfort Nature*, as Wine, Malaga's, and others, or Cordials something more volatile, and all aromatics; or *stimulate*, and cause a brisker motion, and they are either *aqueous*, yet not without volatility, as Penny-royal Water, and such like; or *emollients*, as Water of white Lilies; or *diuretick*, as Emulsions of Gromel-seed, Violets, &c. with appropriated Waters; or *oily*, as the Oyl of Amber, and Amber it self; or *saline*, of which Borax is chief; so that some by a secret name call it Lucina. Or, *as they mitigate and comfort the Nerves*, whose painful irritation does often cause a hard Labour: so that Cinnabarines are then excellent, and *Langius* has a notable story to this purpose of a specifick cephalick. *misc. cur. vit.* 32. pag. 97.

7. *Helpers of the Birth are not to be given, but when the Child is coming forward, and Nature wants help,* to which appertains, 1. The knowledge of the time of nine Months, or 280 days duely passed since conception. 2. True Labour. 3. The instant Child,

Child, which is chief of all ; for if it doth not come towards the Birth, and that there be some opening 'tis not well to sollicite and irritate Nature not as yet acting of it self ; for it often happens by that means, that Nature being unduely irritated, the Child is put into an irregular posture, and great trouble caused : thus Midwives often err, when they sollicite, stimulate, exhort and endeavour to drive ont sooner than they should.

8. *A dead Child, and the retained after-birth bear stronger stimulatives*, such are chiefly those, that have an acrimonious fetid Sulphur ; which a Horses stones doth not want, tho 'tis observed not so readily to perform the business. External promoters of the Birth, unless they are conformable to these intentions, or that by astriction they help the Muscles of the Belly to thrust out the Child, and strengthen them, are for the most part superstitious. But you must note,

9. *That besides other chyrurgical helps, you must oppose putrefaction*, as much as possible, least a putrid Vapour offend the heart ; and cause a dangerous Fever and very fatal ; therefore use balsamicks that resist putrefaction, especially of Myrrh, as the Essence of Myrrh with Spirit of Tartar, elixir proprietatis, which are famed in that case, nor are bezoardicks to be excluded.

10. *Those that move the Menses do not increase Milk* ; for the indications are contrary, and the Motions opposite ; of which see *Langius* in the place cited before tit. 19. pag. 46. who holds this, and proves it by reason, and experience. ( Tho you may bring experience to the contrary, and that by the common consent of Physicians, as Fennel seed do both ) yet the position is true, if it be understood of the more penetrative and strong drivers or pellents.

BOOK

## BOOK II. SECT. II.

## CHAP. IX.

*Of those that increase, and diminish Milk.*

**V**Women think it a slight business to cause Milk to increase, but 'tis not so easie a thing, as they take it to be.

*Those that increase Milk are,*

1. *Either those which increase the Chyle and the serous, and chylous Parts of the Blood; such are only alimentary things, as those that have much nutriment, and are easily digested, as potched Eggs, Almond Milks of Milk, Pine kernels, Rice, and the like; plentiful drinking, which is therefore wisely allowed to Nurses: so Decoctions of Milk, and Milk it self is a great nourisher of Milk. To these appertain Cows-udders, which are rather alimentary than medicinal. But also medicinal things, which have oily Parts mingled with the aqueous, which are conformable to Milk and Chyle, which are nothing else but oily Parts substantially mingled*



gled with watery ones, as the seed of Lady-thistle, &c. and hitherto appertain other temperate things, as Fennel seed, Parsnip seed, Fennel-flow-er seed, &c.

2. Or such as open the Ways and Passages, that it may pass freely; thus all diaphoreticks and sudorificks, as *Langius* says, especially if they be kind, and temperate, have that effect; as absorbents which hinder coagulation, and alkalines. For Salts are the interpreters or reconcilers of Oyls and Water, and therefore they procure the mixture or confusion: so the same *Langius* commends, as a secret, the Decoction of dried Flowers of Elder, with Cows Milk, as an undoubted Experiment, which we have often used for a Vehicle. So Crystals prepared, Earth-worms prepared, and above all *lac Luna*, are of this kind, of which see *Gesnerus*, *Boetius*, *D. D. Major*, &c. so Perwinckle which way soever taken has a power of increasing Milk.

3. Or such as promote afflux of it to the Breasts, as Frictions, Fomentations of Decoctions of Fennel seed, Dill seed with Milk, &c. and Plasters, which some commend. But of all vegetables green Burnet applyed to the Breasts does excel, which *Simon Paulus* very much extols. Of minerals, Crystal, but above all quick-silver, of this you have very elegant reading in *Herc. Saxon*; for he says, that the Women of a certain Country, as soon as they have lost their Milk, did usually fill a Nut with Quick-silver, and afterward wax up the whole, and hang it about their necks, which certainly restored the Milk again: and then he gives two reasons for it, one common, and the other his own: the first is, that of the Women themselves, which say, that the Quick-silver is good against Witchcraft, by which they esteemed the Milk to be stopped:



ped : but his reason is, that the Quick-silver has a vaporous Nature; and is of such tenuous Parts, that it may not only pierce the most inward Parts, but also dissolve and digest tophous Humors. Whence he argues, that it may supply deficient Milk by attenuating and causing a fusion in the thick Blood, which because of its grossness and viscidicy could not enter into the Glandules and Breasts; this is truly very accurate and curious. We dare also confirm the experiment having often tryed it with good effect; and this effect is rightly attributed to Quick-silver, because it makes the Humors more fluxile, both Blood and Serum, that they may move more briskly, and Milk be gathered in the Breasts according to Nature.

And these have place Nurses presently after the birth, and at other times, and in from whatsoever external cause this milky Spring denies its liquor.

By the rule of Contraries, we may easily know *what things diminish Milk*, which have as great use, as the former.

They perform this as they have respect,

1. *Either to the Ways and Passages, by mollifying and relaxing*; for every stagnating Milk, which doth not find out its way by sucking, comes to a concretion and clottyness; so that the Breasts are stretched out and inflamed, and often suppurated; whether Frights did precede, or some other grievous Passion, as Sadness, Mourning, &c. which happens often, the Infants being sick or dying; so it stands back, and doth not so well enter the Vessels, which would carry it to the Heart, as the other Blood, so that it is next door to coagulation: therefore 'tis an expert Medicine, that *Willis* commends, when *he says* that the Milk in the Breasts doth

doth soon disappear by applying diachylon Plaster to them. And we have often found this to be right good; only you must in this as in all others leave a hole for the Nipple, that the Milk may freely run out. So some apply a Pultis of white Bread, with half as much Salt, and most hot water: some foment with Milk. These being applied for some days the Milk runs forth and is consumed without pain.

2. Or the *resignation* by discussing and resolving, therefore in such a case not only bezoardicks, fudorificks, dissipatives, and promoters of its return into the Vessels; but all things, that hinder grumousness and coagulation; and that besides those that reckoned up, *emollients* do perform with main force, as *Sperma ceti*; so that *Timens* says, that in a Tumor of the Breasts nothing avails, as much as *Mysicht's* sparadrape of *Sperma ceti*, if it happens by much Milk. Chervil also and Parsly being applied do discuss and resolve: as also *those that have a volatile Sulphur or Salt*; as Camphire, Saffron which is to be used very sparingly, &c. so *Salt things* also perform this exploit; hence they apply Saffron, Salt and Sage. *Schroder*, and others say, that Horse-radish steals away the Milk; whose leaves we have very successfully used to cure and prevent the Erysipilas. Add to these *bitter things*, which hinder coagulation, and consistence of the Milk, so that all that diminish seed, lessen the Milk also, as Mint, Hemlock, Wormwood, Rue, &c. so externally light, not rough frictions, as with a Weasels-skin, &c. do finely dissipate. To this appertain rubbing with a gentle brush.

Milk is also discussed by a common Experiment which *Helmontius* speaks of, he says that if a Woman leaving of giving of suck Milks her self upon hot Coals,

Coals, they will soon fall and be emptied; it will do sometimes in slight cases, but not in greater ones. Nor is the Womens fear, that the Milk should not again return, to be regarded, for experience tells us, that it will.

3. Or, *the Afflux*, by preventing any further increase; such are *astringents*, as they use to make a quilted bag of the Powder of Myrtles, with a hole in the middle, and this they anoint with Oyl of Myrtles, but they had better let the Oyl alone. Or *repellents* either *terreous* and *aqueous*, as of common White-bole and Cerufs with Rose-water, a Mass is made and applyed: or *acids*, as simple Vinegar, or saturnized, either applyed alone, or with discutients; hence we have an excellent Experiment in *Morellus* p. 567. of a Sponge dipped in the decoction of Cummin seed and Coriander seed, made with Vinegar of the sharpest sort, which doth the business with good effect; which we have found to be true in some Persons, that it was tryed upon: hitherto appertain Oxycrate, Oyntment of Roses, a Pultis of Bean-flowers, Lentils, Cummin seed, Coriander seed with Juice of Night-shade, Plantain, and Oyl of Red-roses. So *Pliny* commends the dregs of Vinegar.

To this also conduces a *compression* by *strait and close Garments*, and otherwise, and chiefly moderate, thin, dry diet, and little drink.

These have their use in three cases, when Children are weaned, and then it is more easily done; or when they dye, where it is more difficult; or to dry up the Breasts of those, that will not nurse their Children; which we have often very easily done with Plaisters.

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## *The Way of Using and Applying them.*

1. *Fat things are not to be applyed to the Breast in restagnations of the Milk,* for they not only moisten too much, and cause a greater influx, but they easily, either cause an Inflammation or increase it, where they find it. So that as often as we have observed them to be applyed in Pains caused by the Milk, so often a suppuration did follow. Discussients are better in that case, as the Water of Quick-lime, which, if any will, hinders all Inflammation, Cools and Discusses.

2. *Repellents are not so convenient in cases of the Breast,* both because of the nearness of the Heart, and that they easily cause a coagulation and cheesiness of the Milk, and hinder the Motion of the fluxile Humors, that they cannot return to the Vessels, be discussed or flow out: so that only mild ones, and presently at first, or else mixed with digestives are to be applyed.

3. *Repellents of Milk are not to be applyed to the Back,* for so you only hinder the Influx, and not repel what is in the Breasts. Thus have we experienced the Plaister of Frogs spawn, with that which is called Album coctum to the Back, and Diachylon to the Breasts with good advice and success; for so, that which was to flow was stopped, and that which had its place in the Breasts, had freedom to flow out, which thing may be imitated in other cases.

4. *The coagulation of Milk is to be hindered by all means; but if it cannot be softened and discussed, you must promote suppuration.* So that you must always mingle resolvers of Smallage seed, Cummin seed and  
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Coriander seed, &c. So cutting things are to be mingled with Acids. All we have said holds true when the business is as yet under the dominion, and Sphere of Nature; but if otherwise, no Remedy, but suppuration; which is performed with the most penetrating Emollients, mainly with Linseed Oyl, Honey, Linseed Meal, Yolks of Eggs, Turpentine and other things spoken of before.

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 BOOK II. SECT. II.
 

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## CHAP. X.

*Of Anodines and Narcoticks.*

**A**S nothing among all Symptoms is more troublesome than pain; so nothing can be more acceptable than mitigatives, and such as ease Pain.

But that we may the better proceed in the handling of these, we must premise a distinction between internal and external Anodines, for their way of Acting varies according to the place of application.

They are both loosners of the Tension and Vellification of the membranous Parts, but in a far different manner.

1. It is performed *externally* by *emollients* effectively such; whether they be *mucilaginous*, as the good and common one of fine Bread, Milk, Saffron, Whites of Eggs, &c. thus Earth-worms applyd alive mitigate the pain of the Whitlow, and other pains, with these bruised and applied, we have cured most sad pains of the Back.

Or

Or *tepid moistures*, as Baths, Fomentations, and other topicks, which, by their kind, gentle heat, do relax and digest, and so mitigate excellently; thus Baths are best in pains of the Stone, and the like; thus 'tis used, and *Hippocrates* commends it to apply a Bladder full of warm Milk to the side of the pleuritick, for tho, as some say, none of the Liquor can penetrate the Bladder, yet the kind tepid Heat by th's means long continued doth very much ease the Part.

Or, *fat things*, which as such do mitigate, unless somewhat may hinder their application. So the common anodine Oyntment consists merely of fat things; so the Yolk of an Egg is rightly placed among these Anodines. And all Fats agree in this, only there is some choice to be made.

2. By *repellents*, and such as hinder the afflux of Humors, and as the former assuage, so these dull the Sense of the Part; such are all actual and potential cold things, as *Bartholine* mentions one cured of the Colick by the application of Ice; for the heat is by this means concentrated, and consequently the irritation and pain remitted. To these belong Frontals, Epithems, very usual in Head-aches, as ung. Alabastr. and the like.

By *digestives*, or such as have a kind and smooth power of heating and discussing, which strengthen the natural Heat, and by relaxing and opening the Pores, cause much of the vitious Matter to fly away. And these are properly called *paregoricks*, whether they be Bags, Fomentations, Feet-walhes, or such like.

Hitherto in particular belong *heruines*, which by their balsamick, gentle and acceptable virtue mitigate and take away sharpness and acrimony: Or *spirituous*, as Spirit of Wine, which doth often alone take away pains, aqua magnanimitaris, the Spirit of Earth-worms, done with Spirit of Wine.

tho it performs not so powerfully. Or *oily*, as Oyl of Venice, Soap, of Wax, the carminative Oyls, and many boyled Oyls, as of Chamomil, Dill, &c. Or *urinous*, as Spirit of salt Armon. either by it self, or with Spirit of Wine, of Harts-horn, the volatile Spirit of Earth-worms, and the like; which most of all comfort the nervous and membranous Parts, and ease their Pains. Or *mixt*, such is our nervine liniment of the Water of Magnanimity, the volatile Spirit of Earth-worms, of Harts-horn, and salt Armoniack all together; which is excellent.

And these are convenient in all Pains; but not alike, and the same way to all Parts.

Thus for Joints and membranous Parts the spirituous and digestives are best; not fat things, but emollients are of some use; so emollients are best, where the ways are to be relaxed, as in the Stone and Inflammations, that tend to suppuration; digestives, and the spirituous, where you would discuss. So repellents may be better used to dry and safe places, as to the head, but not so well to the soft and moist, as the Breasts: see therefore, that the latitude of these is great, they are to be well distinguished, and varied according to the distempers and the Parts, and in this a good Physician differs from Empiricks, who apply all things to all, without any respect, so that they generally do more hurt than good.

Let us note further for the explication of these,

1. *Opium* is better internally than externally; not but that it may be used thus, but because it more respects the cause the other way. And among ro-picks it acts for no other reason, than that it asswages, digests, and mollifies, and communicates  
part



part of its effluvia with the Blood. But those before named are used more, as topicks, and externally.

2. *Narcoticks do not (unless by actual coldness) take away the sense of the Part they are applyed to, they do not repel but discuss, mollifie and digest.* It is an old and false Opinion, that narcoticks are cold, whence they imagined, that the Sense of the Part was intercepted, taken away, and deadned by the application of them; which is against experience; thus Opium applyed for twenty four hours is so far from taking away the Sense, that it rather mollifies. Thus Henbane with Milk doth excellently take away scorbutick pains, of which *Drawitius in his Tract of the Scurvy*, hath a neat experiment: but all this is by its mollifying, and digesting faculty; so the Plaister of Henbane doth excellently allwage Pain; and not only so, but as occasion is, it discusses and promotes suppuration; the reason is the same of Hemlock; so that some talk vainly, that the use of the Plaister of Hemlock is not good for a scirrhoufness of the Spleen; because as they say, it congeals it the more. Therefore shake of that supposition; not that I deny, that a narcotick Sulphur is to be found in these, which may be by external communication afford somewhat of that nature to the Blood.

3. *External narcoticks and anodines do as such, aswage pain, but cause sleep by accident, but are not, (besides Medicaments of Poppy,) so much in use to help watchings; but opiates do both; for as Pain causes watchings, so Pain ceasing, these also cease.* But to give Hemlock, Mandrake and Henbane inwardly, ought to be abominated; for they have an impure, indigested Sulphur offensive to Nature.

Now we shall digress to internals, and premise;

4. That anodines and narcoticks differ only in degree; but all anodines or narcoticks are not hypnoticks, for the binding up of the Senses, which is properly narcotick, (if we speak of internal Medicaments) is effected by tying up the animal Spirits, that they do not flow; but are detained by the narcotick Vapour, as with a chain or band; so that internal anodines in a large Dose are narcoticks, and narcoticks in a little Dose are anodines.

5. Notwithstanding, there are some anodines which are not so much narcoticks; namely those, that mitigate the acrimony of Humors, and consequently take away Pain; and so by accident induce sleep, but are not soporiferous by a primary intention; as the anodine Sulphurs (which vulgarly are called narcotick) of Metals and Minerals; as I have known eminent examples in natural Cinnabar, which has taken away Pains of the Teeth, Head, Nerves and nervous Parts; so Cinnabarines are good in extream Pains, by taking away the tension and vellication of membranous Parts, for they destroy and precipitate sharpness, and acrimony, as in the Gout, Pleursie, Stone, &c.

That we may better know the Way of Acting of soporiferous things in particular, and narcoticks in general, and chiefly of opiates; their virtue consists neither in Salt nor Mercury; but in Sulphur, which is (1) kind; (2) easily resolvable, the inflammability, oilyness and sinell, &c. of Opium, Saffron, and the like, make it manifest, and so doth their destilled Oyls. We say 'tis kind and gentle, that we may remove all that have not such Sulphur, but an immature, fetid, indigested sort, not but that these may cause sleep even to death. It is also

so resolvable, both in it self, and in respect of the Body; in it self, as it is also joyned with volatile Salt, as in Opium, Saffron, &c. so that they are soon dissolved in the Stomach and exhaled, and easily communicated to the Blood; 'tis known, that they dissolve in watery Vehicles, as Emulsions, Spirit of Wine, &c. and there expand their Sulphur, and dissolve and consequently gain an activity. So that in general, narcoticks and hypnoticks have a Sulphur more or less vaporous and resolvable, either mucilaginous, as in Hemlock; or aqueous, either superficially so, or profoundly, as in Lettuce, whose Juice is said to be fatal, which I will grant to be hurtful, tho not deadly; and it may be perceived in Night-shade, Hemlock, Wine, Ale, &c. but it is more purer in some than other, as in Wine, Saffron, and Emulsions of the cold-seeds, in which last 'tis most mixed with moisture: to which Order and Class all others may be refer'd, which trouble the Spirits, cause drunkenness by their Vapours, and make Men torpid.

This Sulphur being resolved in the Body, doth display it self in Vapours, which are carried along with the serous Parts to the Brain, whose Pores by this means are kindly and strongly obstructed, and so sleep creeps on, not that the Spirits are thus destroyed, poisoned, made worse, or extinguished, as *my Lord Verulam* and *Willis* will have it, but clouded, that they cannot move freely and exert their Functions. Therefore as two things are required to cause sleep, a gentle Serum, and a mild vaporous Sulphur immersed in it, yea even in a natural state; so it is as true, as that the Sun shines at Noon-day, that Opium doth not operate, or become anodine, or rather narcotick, or cause sleep, unless there is a due proportion of Serum: so that

we

we state the Serum to be the Vehicle, as well of alim-  
ments, and particularly of the alimentary Sulphur,  
as of the medicinal Opium, and in general of  
all Medicaments. Now follows,

*The Way of Applying Anodines.*

1. *No Anodine excels Opium*, this is best of all,  
which alone, if a Physician knows how to use it, is  
sufficient. Let hypnotick Waters and mineral Sul-  
phurs, as of Vitriol, have their due praise, yet  
none excels Opium duly prepared; so that Wil-  
lis, and others say well, that Physick cannot be  
without it; *Silvius* used to say, that he had rather  
not be a Physician, than want Opium; and *Platerus*  
as *Rolfincius* tells us, did by way of hyperbole say,  
that he could preserve the broken Wheel of Na-  
ture by Opium, intimating, that no Pain could op-  
pose its virtue. So that we may not only use Opi-  
um safely, but it is very necessary to be used.

2. *Opium doth not mitigate Pains palliatively, but  
really*, they are too nice, that always say the cause,  
the cause, is to be removed, and that it is against  
method to obviate the Symptomes of Pain with O-  
piates, which continue but for a short time; but  
it allwages the acrimony of Humors, and detains  
the morbidick Matter as in its center, and affords  
quiet and rest to Nature: so that its not constant-  
ly and absolutely taking away Pain, is not to be at-  
tributed to the Medicament, but to the abundance  
of Pain, and morbidick Acrimony, which you must  
also obviate with other helps.

3. *Opium cures watchings and procures a sweet sleep*,  
unless those watchings proceed from too much  
dryness, in which case it doth not profit, if given  
by it self; but with moisteners it doth the business;

so

so that thus by a neat contrivance the Brain is lulled and laid asleep, especially in old People and others when dryness, sharpness, or defect of the Serum, doth indispose them: so that lotions of the Head and Feet, &c. belong to this place; as also Vehicles of the Opium, that improve its virtue: of which *Heer. observ.* 2. speaks very well.

4. *Nothing doth so stop the fluxes of the Blood and Serum, as Opium doth.* Thus in hemorrhages of the Nose, of the Womb, in spitting of Blood, in loosenesses, bloody Fluxes, and Fevers with Catarrhs, it incrassates and concocts, moderates and curbs, that the violence of the rushing Humors may be stopped: nor is it any thing to the purpose, that Opium is hot, seeing this is not to be ascribed to first Qualities, but to the manner of its mixture.

5. *As it is more convenient for thin, volatile, watery, acrimonious, fluxile Humors; so it is less proper for thick, clammy, phlegmatick and fixed Humors,* for it makes these more compact and thick: thus in a confirmed Drop sic opiates are very hurtful; for death is thus hastned, and the restagnation grows greater. So that you are to note in general; that where there is very much Humors, and a great restagnation, there they rather do hurt than good; for they hinder their Motion and do not make them fluxile; thus if there be much Humors in the Breast, and require expectoration, as in the Pleurisie, Asthma, &c. they promote suffocation: so in Coughs, heaviness of the Stomach, and others.

6. *Where the Serum is defective you must either not give it, or give it with moistners, and in malignant Cases not without bezoardicks.* Thus in watchings of old Men, unless you interpose smooth moistners, they are fruitless, as *Paulinus* notes, and experience attests;

tests; then you had better use, spec. diamb. diamosch. dule. and the like, which cherish the Spirits with moistners, as Wine, &c. of which you have a notable place in *Heer. observ. 5.* But in all malignant cases where the pain is great, or some grievous Flux, they operate safely and pleasantly; but where watchings alone do torment, then 'tis joyned with emulsions and bezoardicks. Nor has it the meanest place among bezoardicks, as you find in-treacle, diascord. and almost all other antidotes; so that it is well joyned to liquid antidotes, to bezoardick Tinctures and Mixtures, but in a small Dose.

7. *Opium is the best sudorifick*, we shall not find a more trusty and properly called diaphoretick than Opium is, yea *Waleus* says, that Venice Treacle and Mithridate have all their sudorifick virtue from Opium: and, *he adds*, I have tryed these two Electuaries without Opium, and they do not cause Sweat. So that it increases the force of other sudorificks, and by it self will cause a gentle breathing Sweat. Out of all this you see what respect is to be had to the Serum, that its Sulphur may be resolved, and brought to act.

8. *Let the Dose be rather less, than more, a mean is the best.* We observe two necessary distinctions concerning the Dose of Opium: 1. *Between the ordinary and extraordinary Dose.* Opium of it self, without addition of superfluous ingredients, may be given from the fourth part of a grain to gr. i, ii, iii, or iv. and this is sufficient, if you carefully respect the degree and proportion of the indicant. But upon violent Pains, very acrimonious Serum, &c. custom, and such circumstances varying the case, you may ascend higher, which extraordinary occasions do not make a rule. 2. *Between a primary, and secondary intention.* Thus when we would put a  
stop

stop to urgent pains, watchings and fluxions we need a greater Dose; but if we joyn it with other things, as moistners, astringents, absorbents, febrifuges before the fit, &c. it is given in a lesser Dose, as half, or a third part of other Doses: by a primary intention it is given in the Night-time, but seldomer: by a secondary intention at other times, and oftener; for Nature is most of all in this case contented with little, and 'tis better to give it twice well and safely, than once amiss.

9. *The internal use is often better than the external;* for that is the speediest way to actuate it, the other remote, less safe and perfidious. So in Tooth-aches you had better take it inwardly, than apply it to the Tooth; tho I hardly believe, what some say, that by this last way some have killed themselves. So 'tis better omit it in Clysters, especially seeing all Clysters are strangers to the Guts; nor will pain and acrimony be so well allayed this way; as the false supposition concerning Opium would have it. But otherwise it is safely used in Plaisters and Oyntments; but there the reason of operating is far different, as we have said before.

10. *Opiates are not convenient in great weaknesses.* They help indeed the wearied, the pained, and refresh the weak, but not when weakness is extream; & they accelerate death in dying Persons; so they are not to be used when a Woman is near her delivery of the Child, for those pains are rather to be promoted then stop'd. So they are to be used very cautiously in weaknesses of the Stomach. This is most to be understood of primary Doses, not of little ones, which are easily remedied, and the strength regained and restored being repaired by sleep, the pains asswaged, and the violence of the Humors curbed; on the contrary if the strength being exhausted,



hausted, and the Spirits spent, opiates tye up the remaining Spirits, then death comes speedily.

## BOOK II. SECT. II.

### CHAP. XI.

#### *Of Sternutatories, &c.*

**W**E have spoken of *expectoratives* under the Class of *pectorals*, and *pneumonicks*; therefore we will not repeat them.

But that the way of *Acting* of all such Medicines, as are *sternutatories*, and *purge the Nose*, may the better appear, we presuppose,

1. That the Membrane of the Nostrils is sensible, both as to the sense of Smelling, and this is very subtile, and perceives the finest and most delicate effluvioms, insomuch, that it is as it were an immaterial sense; and also the common sense of Feeling, which as it is universal, and belongs to every Sense, so it is joyned to every proper sense; both which occur in this place.

2. That the Passages of the Nostrils are strainers for the transmission of superfluous serosities, chiefly of the salt ones, not by a continual dropping, for that



that would be very troublesome, but by little and little gathered together ; as the Humors, and superfluous Lympha, fall from the Glandules, salival and lymphatick Vessels (not are the salival Vessels any other, than the lymphatick) and thicken by the heat, and the external Air into a Snot.

3. *That the Nostrils are emunctories and ventricles of the Head.* For whatsoever some Fantasie concerning the use of this part ; yet 'tis certain, that the fountain of Catarrhs, is not to be sought in the Brain, but in the individual concomitant of the Blood, which is the Serum ; for the Elements of Life consist in the Blood and Serum, as being hot and moist ; as the abundance of the Lympha, which is separated in the Glandules, gives supply ; but that the Brain is priviledged and exempted from Catarrhs we cannot assert, unless we deny, that it is washed by the Serum, which will be absurd ; and therefore it is affected in such cases by the flux of Humors, of which this is not a place to enlarge our discourse.

Now we will apply these things to sternutatories, way of Acting, for the reason of the activity of Ptarmicks, and errhines consists in soliciting, irritating and vellicating the sensible Membranes of the Nostrils, not by an internal, but external cause. Hence it is,

1. *That whatsoever nearly affects, and as it were tickles this Membrane, doth sollicit excretion and sternutation.* Thus not only a feather, or the like, do excite sternutation, but also unequal Motions of the Air, and the heat of the Sun upon our going out of doors ; but chiefly those that have either a fixed saline virtue, as white Vitriol with Marjoram water, or a volatile and acrimonious Quality. So all acrimonious things are ptarmicks, and all purgers.

2. *The*

2. *The more free the saline Particles are, the more they stimulate, the less, (and more obtuse) the less they act: those are called ptarmicks, which act with sternutation; these errhines which without it liquifie the Humors.* So that the more intimately they close to this Membrane, as Powders and dry forms, they operate the more; and the smaller the Powder the more vehemently they work: so that Liquids are more mild. These two differ only in degrees; for errhines in a larger Dose become ptarmicks, and ptarmicks in a lesser Dose become errhines.

3. *When this saline stimulative touches the Membrane, three things follow. 1. Irritation. 2. Fusion and liquation of Humors, which this saline stimulative doth well perform. 3. Excretion with, or without a strong Motion.* As to

### *The Way of Using them.*

Besides what has been said before, you are to note, that,

1. *Errhines are more for the use of the Nostrils, and ptarmicks are more used for other Parts.* Thus errhines are most in great Runnings, Ulcers and Excrecencies of the Nostrils, for cleansing, dissipating and freeing of the Passages; but sternutatories are not convenient in those cases, nor where there is a disposition to bleed at Nose, in which case stanchers of Blood, as Florentine Lack, puff Murshromes, Ink, and such like are used as errhines. Therefore we add in general; *That when there is some infirmity in the Nose, you must abstain from ptarmicks.*

2. *Sternutatories lighten the Head; the Body being evacuated, and the Tcourse drained; for as we said before, universal evacuations are to be prefer'd,*  
that

that is, when the Humors remain; otherwise we have reason to make haste. So that in general they are not convenient in a great repletion and restagnation of Humors. Therefore in Catarrhs and great Defluxions at the Nose, you had better let them alone till the declination of the Distemper, than use them in the beginning when all are as yet crude.

3. *Sternutatories excite the Faculty, excern and stimulate*: therefore they are convenient, when the Faculty is torpid, dull and heavy, as in the Apoplexy, Lethargy, and sleepy Diseases. So they make the Humors fluxile when they do not pass in sufficient quantity, but are sluggish. So they stimulate when there is need of it; therefore when they do not operate 'tis a sign, that the Faculty is deadned, as I have seen sometimes; for Nature doth not any more perceive the spur; this holds good in purgers also.

4. *Sternutatories may excite and drive away the Epilepsie*, this some have found, who, in darkness of the Eyes, and hardness of Hearing, have used them, till they induced an Epilepsie, as *Schenkius* notes; and they take away the Epilepsie, as they lighten the Head, and discuss what is troublesome. Upon this occasion, I will tell you what I have often observed in epileptical People, that sneezing doth sometimes precede, sometimes follow the Epilepsie: in some they have gone before the Fit for some hours, or a day or two, and often enough, as to 20, 30 or 40 times, that they have been forced to make use of warm Water or Milk to mitigate it, the sad Fit following afterward; this happens, because of the Acrimony that is thrown upon the Membranes of the Brain, which by consent moves and frets the Membranes of the Nostrils,

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and

and Natures endeavour to shake off its grievances. The relicks of the Matter do cause it in others after the Fit, which together with Natures endeavour throws out some part of the peccant Matter; whence it appears what great things Nature suffers in this Disease, and how provident it is. So a Physician must endeavour to help Nature, yet so as not to do any harm, for he must be very careful and circumspect in this matter. 1. He must use *mild ones*, for Nature abhorreth violence, yea if it be violently impelled of it self, that is, against its will. 2. *Cephalicks* which are pleasant and acceptable, so corroborate the Head; or *Nervines*, as the Powder of the Flowers of Lily of the Vallies, Castor, Amber, &c. 3. If the sick Person abound with Humors, irritatives may do harm. 4. If in the Fit the sick Person is observed to have a greater loss of his Functions, than he has of convulsive Motion, they may be used. 5. So they may be used to excite in the Fit, or its declination. These things make *Caelius Aurelianus* say, that sternutatories are not convenient in Epilepsies; but they are useful with such cautions, as I have laid down.

5. *Psarmicks* are not convenient for the vertiginous. The reason is almost the same, as it is in the Epilepsie, for they trouble the Spirits, and irritate, so that a Vertigo doth often follow reiterated sneezings; so that in an essential and grievous Vertigo, you must abstain from the stronger sort at least, or else you must deal very warily, if you use them.

6. *If the Parts, that concur to sneezing be amiss, or inflam'd, you must avoid sternutatories.* So that, besides what we have said of their troubling the Spirits in the Epilepsie and Vertigo, they are not convenient

venient in venereal Pains of the Head, in Fractures, and disjoinings of the Ribs; nay, nothing is worfe in these Cafes than sneezing; fo in Ulcers of the Lungs, fputting of Blood, &c. yea alfo in great hurts of the Belly; as in the Navel-burf, &c. for all thofe Parts are shaken, and fo a greater hurt or pain may follow this microcosmical lightning.

7. *They are to be avoided in great hurts of the Eyes:* For they are contracted in this act, and the glandular Veffels ftimulated to excern; fo that the Eye doth fhed Tears: and this delicate part cannot bear fuch things in ophthalmies, Wounds and Pains.

8. *Ptarmicks ftop a hiccough,* not only becaufe of the great confent of the Head with the Brain and Lungs; but alfo becaufe of the difcuffion of the Vaporous and flatulent Matter, and a compreffion, and calefaction of the Fibres; we have for this, befides *Hippocrates* his testimony, a neat place in *Plato in his fympos. pag. 320. & feq.* when other Remedies were propofed, as ftopping the breath, the wafhing of the Mouth with cold Water, *Aristophanes* one of the Guefts adds, that the hiccough was not ftopped until they ufed a sneezing Powder, and that it always gave over, as foon as the sneezing began.

9. *Ptarmicks help Women to be delivered.* What *Galen* fpeaks of Vomitories, all that is true of fternutatories, that they help the birth by a violent compreffion of the Mufcles of the Belly, and 'tis much to be questioned, whether sneezing be not more efficacious than vomiting.

10. *Ptarmicks are proper for Humors.* For they take away the Serum that ftays in the fore-part of the Head, and promontories of the Brain, and dif-

cufs whatsoever sticks in thofe Parts. Therefore they are of greater ufe in diftempers from pofitive caufes than privative; fo that they are not fo convenient in dry, bilious, or melancholy conftitutions, as in the phlegmatick, who have much ferum, whole coagulation they wonderfully oppofe.

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## BOOK II. SECT. II.

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### CHAP. XII.

#### *Of Maficatories and Salivating things.*

• **A**S Nature makes ufe of the Mouth and Palate to empty Spittle if it abounds, or is tainted with an evil Quality; fo the Phyfician doth not want thofe helps, which promote a Flux to the Mouth, and fend out the Lympha or Serum.

From their ufe they are called *maficatories*, from their effect, *Apophlegmatifms*, becaufe they bring the Serum to the Mouth, either coagulated, (which is called Phlegm) or fluid: tho thefe, to wit, maficatories and excitors of falivation are commonly fpoken of diftinctly, and afunder, yet it feems to me more expedient to place them in the fame Clafs, feeing more or lefs doth not vary

a species, for both draw and evacuate Humors and promote fluidity, Motion, and a passing out. As to the way of Acting, that it may better appear to us, let us presuppose,

1. *That this evacuation is due to the Serum; whether you will call it Lympha, Spittle, Phlegm, or otherwise.*

2. *That the Glandules are the receptacles of the Serum.* Where it is partly gathered, partly expended for the uses of the Body. But it is extraordinary and preternatural, when it stays there too long, is too copious, coagulates or excites a Tumor.

3. *That in and about the Mouth almost an infinity of little Glandules, and several big ones are found.* Which partly by innumerable Pores open into the Mouth, and let down the Liquor, partly by lymphatick Vessels, which from their use are called salival Passages; from which according to the Quality, Quantity, Thinness, Tenacity, &c. of the Lympha, it flows into the Mouth more or less, for its proper use.

4. *The Mouth is the general Cistern; which receives the Liquor, and dispenses it either by swallowing it, that it may become a Menstruum for the Meat, or by spitting it out.*

Hence we say, that these masticatories or evacuatives of Spittle do operate; ( 1. ) *By opening the Stoppages, and diluting the Pores,* that they may gape the more, and send out the better what Liquor they have in them, and this they do partly by Motion, partly by Heat; hence it is that the tumbling and tossing of Pebbles in the Mouth, or under the Tongue, draws out much Humor. Thus Crystal in hot Fevers is put into the Mouth to allay thirst, that with its actual coldness it may please the sick Person, and check the Heat, which exhausts all the



Gentle moisture; and also invite moisture into the Mouth. Mastich is very convenient for this purpose; it strengthens the Glandules, pleases by its acceptable smell, is fit for Motion, because it is in round pieces, so that we use no other than granulated Mastich, which in few hours draws several ounces, yea a pint of Spittle: yea whatsoever is masticated doth by its Motion promote the increase of Spittle, if there be any moisture left.

2. *By causing a fusion, liquation and refection of the ferous Humors, chiefly those, that lurk about the Mouth, that they may be more fit for Motion, and passing forth; such are hot things, that have tenuity of Parts, whether they be saline, as Niter, Sal pronellæ, Niter antimoniæ, and nitrous things in general; for this may be noted as a Rule, That all nitrous things, and all Salts in general do make the Serum fluxile; so that these are not so convenient when the Serum offends by its Motion. Or sulphureous resinous things, mingled with acrimonious, volatile salines, whether explicite or implicite, as Tabaco, Pellitory of Spain, Cubebs, Guaiacum; in dry or liquid forms, as Decoctions, spirituous things, apoplectick Waters, as in speechlessness, &c.*

3. *Or by causing a fusion and moving all the Humors in the whole Mass of Blood, that they may seek the Mouth, and so a passage out; such are mercurials given, and used several ways.*

*Their way of Acting in general doth agree with the other things, in that they render the Serum fluxile, and invite it to the excretory place, as namely the Mouth. But in particular there are found in Mercury, sharp, saline Parts, and sulphureous, volatile Parts, which being intimately received are actuated by the Heat, and acquire as it were*



a Vehicle in the Serum and Lympha, which they excite to Motion, liquifie and separate, that by its restlessness it may find a passage out, and finds it chiefly in the Mouth, which is so full of Glandules, and large Pores; hence Mercury purges, and causes salivation (which is almost specifick and peculiar to it) while it retains its volatile and vaporous Nature; not so, if fixed into a most dry Powder; the heat of the Stomach or external Members, (if anointed with it) seem to resolve some part of its vaporous nature and substance, which ascending by degrees, excites the slow, compact, sluggish Humors into motion; and gently provokes them, which if they be once made fluxile enough, they are assisted by the heat of all the Intrals, and are expelled; of which see *Majer. de 7. mont. planetar. cap. 1. pag. 82.* Nor is it to be wondered at, seeing that with a gentle heat, that *Proteus* will freely amalgamatize with Metals, joyn with them and coagulate; why, being communicated to our more gentle vital heat, and rubbed against the delicate flesh, should it not penetrate to the very Bone? and having insinuated it self to the Pores manifestly show its efficacy.

Hence mercurial salivation came to be so extolled, that it was prefer'd from particular evacuates to the Class of universals; which indeed may be granted to it, as it doth by consequence drain the whole Body; so that it may be called an universal Apophlegmatism. Yet it is only in some respects, that it may be admitted of this Class; and for that reason 'tis advised, that before the use of salivation, we take care of the whole, as occasion requires, either by purgers, blood-letting, or which is more available, by both. As to

## The Way of Applying them.

Many things are to be noted,

1. *That some are proper, some improper masticatories*; these are such as draw Humors by means of mastication; these without it, whether they be put into the Mouth, or not. So that *apophlegmatism* is a more general term, than *masticatory*; thus in speechlessness, and Palsies of the tongue, Liquids of Mustard, Treacle, the anacardine confection, apoplectick Water and Spirit of salt Armoniack, are good to rub and wash the Mouth with. So for the Tooth-ach, not only the mastication of Pellitory of Spain, but things extracted out of it, guaiacum, and Cloves are in use. Our Tincture for the Tooth-ach is highly effectual against those pains, and to other ends; that we may not speak of those which are manifest in themselves.

2. *Masticatories evacuate the conjoined cause, and free the adjacent Parts*, and they are most proper in those cases wherein the Serum rests, and stagnates, either by a collection or defluxion, and this happens in the Tooth-ach, hence empiricks lay artificial stones upon the Teeth; so that is a true Rule, *That masticatories and apophlegmatisms are very laudable in the Tooth-ach*. So they have an excellent use for scorbutical Gums, and swelling Glandules, with some limitation, which we will add by and by; so they lighten the Head, and give it ease; and here we may mention the apophlegmatism of *Laurentbergius*, or masticatory globules to comfort the memory, described by him in the Mnemonick Art, which we have published. *Those are more gentle, these stronger*.

3. *Masti-*

3. *Masticatories* are more proper against the rest of a copious Serum, than its deficiency or extravagant Motion. So they are convenient in all cold Distempers of the Head, Apoplexies, Lethargies, weakness of Memory, caused by Phlegm, where the Serum coagulates and grows gross; but if it be faulty by thin acrimony and fluidity, they are less fit, especially if it wanders. So that they are bad for the consumptive and hectic, in whom the Serum is either defective or bad: you are to use them very warily in an Asthma, or not at all; and so in spitting of Blood and salt Catarrhs, that fall upon the Lungs; and in longings from depraved Stomachs, and a disposition to Vomit: for as vomiting preceeds spontaneous salivation, so the artificial may affect the Stomach, that what is imminent may be brought to act.

4. *Let masticatories affect the Mouth kindly, and not hurt it.* Thus as *Heurnius* says, those things, that are to be held in the Mouth should be of an acceptable taste and smell, and not ungrateful and stinking. They are not convenient in a weakness of the Teeth and Gums, unless it be to corroborate, nor in Ulcers and Inflammations in and about the Mouth, so that it is better letting them alone in Quinsies. The external form also may vary from various intentions: for drawing down the lymphæ, solid masticatories; for opening the Nerves, and comforting the Teeth and Gums, liquid or soft pulpy forms are most eligible.

5. *Masticatories supply the place of Pearmicks:* and where these can well be used, those have often a good use; for as in general mild things may be substituted to the violent, so in particular many things exclude sternutatories, and yet admit masticatories and apophlegmatisms. This chiefly holds

holds good in Distempers of the Eyes and Nostrils; for these parts, as we hinted before, suffer more by the concussion in sneezing.

6. *In particular, mercurial salivation is performed by internals and externals, or by either of them or both together.* Mercury alone performs all this prepared, if internally used; as for a milder use, and more frequent, Mercurius dulcis to ℥ss. or gr. xv. yea according to others to ℥ss. or ʒiſs. is exhibited, for more violent, Mercurius precipitatus ruber, being somewhat freed from its great Acrimony by washing it in Rose-water, in which case it usually works by Vomit and Stool. It is done externally by crude Mercury any way deadned, but anointings are the most usual; for which purpose many Oyntments are invented, as the Neapolitan Oyntment, *Rolfincius* his mercurial Oyntment, or mingled with Oyntment of Roses, ʒi. of that to an ounce of this.

The effect will follow more readily by an internal and external use joyned together, but by one way alone it works more slowly and mildly.

7. *Mercurials for salivation are not to be given in the form of masticatories or fumigations, but are more mild in Plaisters and Girdles.* Tho Mercury is a potent masticatory, yet it is a great enemy to the Teeth, and all bones. Some make masticatory balls of ℥i of Mercurius dulcis, ʒi. of mastich, and as much honey as will suffice, but you had better not imitate them. And being resolved into vapours by fumigation it is more offensive to the Nerves, see *Rolfinc. ord. et meth. comment. p. 593.* but it may be used in particular cases, as it is by the Chirurgeons in Gallick Ulcers of the Yard. But it is often used in Plaisters to salivate or resolve, for it performs both; it resolves when it works mildly,  
and

and salivates when strongly. The Plaister of Frogs with Mercury is most usual in that case, increasing or decreasing the Mercury, as seems good to you, which in all hard Gallick Tumors, Concretions and Pains, is most laudable. The Girdle is either simple of Quick-silver extinguished in any viscid thing put in Cotton, and sowed up. See *Hochstett. decad. 3. cas. 7. p. 248* or more compound, as *Rulandus* his Girdle, which is called *Cingulum Sapientiae*, a harmless Medicament, if it finds one that can rightly use it.

*Mercury is the rooter out of the Pox, and other stubborn Diseases.* As 'tis more safe to cure by Sweat than Salivation, so this is more effectual than the other, where a Distemper has rooted it self; so that as heroick Medicines are fit for giantick Diseases, so this is greatest among such Medicines in the venereal Distemper, as to the Disease it self, and all its Symptoms, Pains, Tumors of the Glandules, &c. so also in the Epilepsie, Gout, and madness, it is of great power; and 'tis found by experience, that salivations for the Pox have perfectly cured those Distempers also. But by this we do not exclude other things; for salivation is to be performed after we premise universals, purgers, sudorificks, &c. and towards the end you must enjoin sudorificks. I have known a strong gouty fellow to be freed from his Gout by mercurial anointings. He was so respited for three years, but the Distemper returned afterward, tho more mild.

9. *The external use of Oynments is either more universal or more determinate.* Some anoint the shoulders, the Back-bone, the Breast, the Arms, the Belly, the Legs, the Palms of the Hands, &c. But it is better to use Plaisters to the hinder part of the Neck

Neck, and Oyntments of the Joints to the extreme Parts. Thus in the cure of the Itch, they do conveniently anoint People upon the Joints of the Hand-wrist under the Arm-pits, and under the Knees, out of which we note two things. 1. That the Remedies of the Itch and Pox are the same. 2. That Mercurials do often cure the Symptoms with raising a salivation.

10. *While the spitting lasts avoid all external cold;* so that the sick Person is to be kept in a warm place, nor are you inconsiderately to change your Garments, least this Motion be interrupted. Salivation by inunction, or taking mercurials, follows, in some sooner, in some later, as the fourth, fifth, sixth or seventh day.

11. *You must look to Symptoms, that are raised.* They are many; so that some have rejected salivation altogether. Sometimes a long Fever happens by the tumult of the Blood and Serum, of which see *Poter. l. de feb. c. 15. p. 18.* but chiefly a base, loathsome stench, shaking of the Teeth, blackness of the same, and weakness for a time. So when the Teeth shake you must desist; and if the Flux continue too long you must add astringents and opiates; hence it is worse for cholerick Men, than the phlegmatick; but in all much caution is to be used.

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 BOOK II. SECT. II.
 

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## CHAP. XIII.

*Of Aphrodisacks, or helps for Venereal performances.*

**A**S generation and production of the Species is most natural, so those Medicaments, that help in this case, are of Physical consideration; and also, by the force of contrariety, those that lessen feed, &c.

These are either *strengtheners*, or *substantial nourishers of seed*, analepticks, spirituous things and helpers of the natural heat; as alimentary things, that have good nourishment, much nourishment or things of easie digestion, which soon turn to chyle and Blood, and, besides Wine, things milky, oily and sweet, as sweet Almonds, Pine-nuts, Pistachies, Dates, potched Eggs, Milk, and other nourishing kinds of food; or medicamentary things added to them to season them, as aromatics, &c.

Thus Cock-stones are mostly esteemed by *Varro-la*, to increase seed; so a Sparrows-brains, Artichokes, Oysters belong to this place. So some feed Hens with Vipers, and commend the flesh of them against impotency. Some also among Medicaments are of this kind, and have respect to the spumeous nature of seed, as Satyrion, and other  
Bulbous

Bulbous roots, Cotton seed, which *Hoffman* commends, Ambergreece, and many others.

Hence it is a proverb, that without *Ceres*, and *Bacchus*, *Venus* cools, being a manifest sign, that if the Body be well fed, 'tis sufficient to enable it to perform this business. So it is that young, lusty, & spritely People, after good eating and drinking, have commonly nocturnal pollutions the night following, because most of the superfluous food turns to seed.

These things are proper for old People, the weak, and those that have but few Spirits, or after a sickness, or for those that want seed. For they nourish a spirituous, consistent, copious and turgent seed, which is sufficient, if the Parts have vigour also.

Or they are *stimulatives*, I mean *internally*, which by their heat and acrimonious oily Salt, make the seed more turgent, spirituous and irritating, so that an itch or titillation or turgency is felt, with desire to emit, and the musculous Parts provoked to erection. Such are *all aromaticks*, and their nearest relations, *balsamicks*, *sulphureous* and *odoriferous things*; as Cardamoms, Cinamon, Saffron, Cloves, Ginger, Rocket-seed, Ash-keys, which are commonly called Birds-tongue, Hartwort-seed, preserved Nutmegs, Ginger preserved, Eryngo roots, and particularly all kinds of Pepper, as *Solenander*, among others, gives ʒss of Pepper, with ʒiij. of Milk, and ʒss. of Sugar. You may see several Powders of this sort in *Platerus* his observations. So the false seeds in the middle of flowers are aphrodisiacks of this kind, see *Rolinc. O. & M. p. 821.* yea, so are opiates too, either alone, or with Musk, Ambergreece, &c. in form of Pills. For whatsoever is said to the contrary, of which we have spoken in our Opiology, it is experimentally certain, that Opium is an excellent



cellent aphrodisiack, and perhaps performs more than any other, and is by so much the more to be esteemed, because it stimulates and strengthens and hinders the dissolution of the Spirits.

As also *oily and spirituous things*; for whatsoever increases the native Heat, or the sulphureous parts of the Blood, those stimulate to Venery, or at least afford something by way of help; so that aqua magnanimitatis, or Spirit of Ants, simple or compound enter this list; which has got that name by making Men magnanimous or valiant in Bed; so the Spirit of Satyrion and the Liquors and Essences of the things aforesaid.

So aqua vitæ satyriata, aqua vitæ Matthioli, the Oyl of Cinamon, Ambergreece, Musk, Civet, and the complete confection of Alkermes, &c. are of this tribe.

As also *Salts, and other acrimonius things*, that are not aromack; as *Venus* is feigned to be penetrated out of the Sea: so saline things do provoke lust. Common Salt and many salt things are of this nature. So that which is commonly called lac halecum may well be numbred among stimulating aphrodisiacks. So *Mercurialis* doth mightily commend Borax; so those which have the most acrimonious Salts and dissolvable, do stimulate violently; so that cantharides are the strongest of this kind; so purgers turn aphrodisiacks, because stimulative; upon which you may read observations in the first book of *Platerus* his observations, where he relates, that one was so provoked to lust after a Purge, that he could not abstain from lying with his Nurse; another having taken a Purge expostulated with his Physician, whether he had not given him an aphrodisiack. For the *seminal Vesicles* are irritated by the acrimony of the

the purge, that operates so near them, and perhaps by consent too; yea some with hard ordure have also excerned Seed; of which see *Rolsinc. de part. genital. p. i. c. 24. p. 58.*

Or *things of a middle nature*: of this kind are those, which have not so explicite an acrimony, but are partly alimentary, partly medicamentary; as Dears Mushroom, (which we observed to be very slow, insomuch that some have excluded it from this number) a Dears pizzle. So that it was a custom, as *Solenander* writes, to take a drachm of the Powder of it before a venereal engagement. It was cut off in the heat of their rutting, and given in a potched Egg, with a glass of good Wine after it, and it was effectual; so also the flesh of sea Scincs, and some other fish. But chocolate is not to be forgotten, which stimulates and increases the Seed; so that it is taken with good success, boiled with Wine, Sugar and Yolks of Eggs; and so we have commended it to many, or you may take ʒij, or ʒss. in Powder, or with Wine.

Corroboratives, heaters and stimulatives do this *externally* also; as the Oyl of Nutmegs pressed out or destilled, the Oyl of Mace and Cloves, *Mynsichi's* Oyl of Pismires, cautiously adding Cantharides, and Civet with which they anoint the Yard, &c. So Galls are much commended, as that of the Goat, to anoint the Yard, as before. *Solenander* says, that he used it with good success, and *Schenkijus* commending it by chance, and in a Jest to a Hunts-man, who made use of it in earnest, it answered expectations, and he returned thanks to his Physician. As to

*The*

*The Use and Way of Applying them.*

1. *Aphrodisiacks* are more for Men than Women. For as in them it gives Power of copulating, so in Women 'tis needless to stir lust. For as *Hippocrates* says, a Woman wants allays at all times; she has a lasciviousness by nature, which if not daily lopt grows exuberant by the effusion of much Matter. And the example is rare of such as conceive without pleasure; and doubtless they are at that time senseless. But in the barrenness of Women they are of use, that corroborate, not those that stimulate, of which elsewhere.

2. *Those which cause Wind* do not cause lust. It is common indeed to talk, that Wind is requisite to Venery, but *Scaliger* corrects *Cardanus* for such an assertion, for however Wind may be some cause of the erection in Children, and that Wind may sometimes somewhat concur, as we have observed Wind to come out of the Yard, yet they must not be accounted of as aphrodisiacks, there is indeed a quibble in the word *Wind*, which is taken for Spirits, and 'tis true that those that excite the Spirits do provoke to lust.

3. *You are not so much to excite lust in old Men with peppered things, acrimonious stimulatives; as with those that refresh the vital heat and the heart.* This is *Simon Paulus* his position; for 'tis vain irritating where there is no seed. Stimulatives do often loosen old Mens bellies, so that some old fond fools having taken such things have instead of satisfying their young Wives foully belshited their spouse, and bed too.

4. *Comforters and gentle stimulatives* are conveniently mingled with aphrodisiacks. For thus you comfort, nourish, administer seed and stimulate; of this kind are electuar. diascalyr. divers preserved things,

X

Liquors

Liquors and mixtures; we approve chiefly of two Medicaments, the one mild and analeptick (or *restorative*;) the other more strong; that is chocolate; this the stimulative rotules of *Mynsicht*. Yea we have observed, that comforters without stimulatives, and stimulatives without comforters have had but little effect. We speak of gentle stimulatives, for those who unwarily use cantharides are vexed with an unspeakable strangury and heat of Urin, and sometimes with pissing of Blood; the cure of which Symptomes is Milk and Emulsions. See *Langius* in his first book of Epistles, Epistle the 47.

5. *You must observe time and place in applying them.* As to *place* externals are applyed to the *perinaum*, or space between the Yard and the Fundament, to the Loins, to the Member it self, to the great Toe of the Foot by reason of consent, taking care that to the Member it self, you go not beyond Civet and Goats-gall, least a greater acrimony may injure it. As to *time*, comfortable and alimentary things are to be used in the day-time at Meals with internal stimulatives, but externals before bed-time, or an engagement for the space of an hour, or half an hour; that it may alarm the Spirits.

6. *Aphrodisiacks take away impotency by witch-craft;* but you may mingle with them what is commended against enchantments, as chiefly the essence of St. Johns-wort, with essence of Satyrion taken before day, of which see *Angl. Sala*: so other things, as pissing upon new Brooms, has restored many: so also pissing through a Wedding-ring; the filings of Goats-horn taken inwardly, decoction of *Columbine* to wash the Genitals, as *Hartman* will have it. So have we observed it cured by pissing through a hole in a Board or Plank, which a knot of the Tree being thrust out, had left there; so

we

we have known an example of *Carrichterius* his Remedy which is approved; you'll find it in his herbal, p. 252. all these may be made use of in a good sense; but we have restored such only with aphrodisiacks, as namely with the stimulative rotules of *Mynsicht* and chocolate:

## BOOK II. SECT. II.

### CHAP. XIV.

#### *Of Antivenereals.*

**I**T may seem against Nature to extinguish Seed and Heat especially in Man, who, otherwise than other Animals, is inclined to Venery almost every moment; yet there are some cases in which it is to be checked.

Let us suppose, that Seed is the most subtil flowers of the Serum, which is mechanically apparent, and the Body in a natural state; when the Body has acquired a due bigness, the residue, besides what is necessary for the preservation of the individuum or singular substance, which would have otherwise been for augmentation, is employed for the propagation of the Species; but in a preternatural state many Symptomes follow either

the quantity or vitious quality of the Seed. Hence lesseners of Seed, antivenereals, or antaphrodisiacks, if you regard *their way of Acting*, do either, (1.) *Lessen the growth it self*; not so much by subtraction of aliment, which doth much, as by hindering the collection of Seed; either by *constringency*, and so Saturnine Medicaments are the chief, especially saccharum Saturni, prepared by evaporation, which is exceeding sweet to the Taste; but by the Particles of destilled Vinegar joined with metallick Atomes, it concentrates the Serum, that it cannot grow turgid, nor vividly tend towards the genital Parts; so that if it be plentifully given it enervates and un-mans People by its constringency; so the Saturnine Tincture commonly called the antiphthifical Tincture, (tho more rightly the styptick Tincture) is a good antivenereal. And other things do it *by dissipating and destroying the consistence required*. And so procures a diffation of the Spirits, such are preparations of Camphire; of which it is said, *that it gelds by its very smell*; also bitter things, as Worm-wood, Aloes, &c. So sea Willow, which is commonly, but falsely called agnus castus, Rue leaves, Willow, Hemp seed, and Mint are of this kind. Here we must call to mind the Waters and Essences of Chastity. *Mynsicht* has such a Water, and *Michael* such an Essence.

2. *Or those that take away the acrimony, fury and stimulation*; and such are either aqueous refrigerants, as Water-Lilies, Lettuce, Endive, Purslane, the four great, and the four little cold Seeds, Emulsions, and such like, made of them. For as heat, or rather the vigour of the Blood and Serum make much towards the stirring on of the Seed in its passages, so those things which allay  
Heat

Heat and obtund the Vigour, cool and check a Mans courage and inclinations to Venery. Thus great drunksards, the hydropical and cachectical are unfruitful, and unfit for generation. Or *terre-ous* which precipitate and lessen the Motion of the Blood, and consequently of the Seed; as of the vegetables, Strawberry leaves, Acrimony, and such like; so terra sigillata, Corals, Bole-Armenack, Cuttle-bone, which, as also its Magistery, is not unadvisedly given to cure a gonorrhœa, all the Santals, and other things.

Many of these, and such other things, do much externally, by mitigating the Heat. Thus it is usual to strew Vine leaves, Willow leaves, and sea Willow leaves, and such like under People, but they are of little effect. But here Lead Medicaments are above all, which both inwardly and outwardly give much help; thus thin Plates of Lead are much used to cool the Reins in nocturnal pollutions; and this they do not only by their coldness, but that I may use the words of *Langius*, they do as it were magnetically draw out salt Acrimony, which may be perceived from this, that the Part under the Lead doth seem to be always moist, and in a kind of Sweat, in which Sweat the caustick acrimonious Salt doth continually pass away, and so the Heat abates. Yea you may see it stick to the Lead, while it endeavours to dissolve it: all which attraction is by the benefit of the Mercury, which the Lead abounds with; for Mercury is a great destroyer of Salts, causes exhalation, and so it cools both actually and potentially; not to mention, that the lead Plate may also admonish People when they are asleep, seeing it may hurt them a little, when they lye upon their backs, which is the main posture, that causes nocturnal pollutions.



Or *acids*, which obtund the vivid Sulphur of the Body, and are apt to hinder the glutinous consistence of the Seed; Hence Sorrel is commended, (tho it is but a fable, that the seed of it gathered by a Child, that hath not known *Venus* is a present Remedy against the running of the Reins,) Vinegar, cooling Tinctures and Acids, both tartareous and saline. Thus we have observed red hepatica, and the vitriolated Crystals of Tartar, to be very good in nocturnal Pollutions; and *Joel* says, that the Spirit of Vitriol is good to promote the excretion and annihilation of Seed. But *Langius* his observation is very notable, of a Person of Honour, who labouring to alter his Stomach by the continual use of Spirit of Vitriol, had his privy Members so lessened, that it was feared he would have quite lost his virility, which upon leaving of that practice, and using generous helps was restored, and afterward got several Children.

This is also apparent by the rule of Contraries, for as the Body being agitated by too much Motion, or acquiring new Spirits, doth stir the more, and the Serum as it were Foam again, and acquire a new incentive; so those things, that tame this exaltation and ejection, as acids do, do depress and lessen venery.

Or *nitrous and mercurial things*, as they render the Seed fluid, and as I may so say, resolve it to its first being. For it is known that altho Seed has naturally a good thick consistence, yet it readily resolves it self into water. Therefore whatsoever do thus, those lessen the Seed, and are enemies to Venery. Thus in particular, nitrous things make the Serum fluid, and also invert the Sulphur; therefore you read a notable observation in *Timæus* of a very lustful Man, who by the use of Niter did  
cease



cease to be troublesome to himself and others, that he by his great heat pursued; mercurials have also an implicate acidity, which makes the Blood and Serum extremely fluid, takes away strength, and they are apt to weaken all the nervous and muscular Parts: nay nothing is better than mercurius dulcis in any gonorrhœa, either simple or virulent.

Or a *middle sort*, which correct the Motion of the Serum, and stop its fluxes, take away acrimony, and with their balsamick virtue keep the consistence entire, strengthen the seminal Vessels, if they be exulcerated, relaxed, or otherwise offended, they cleanse, divert Humors, such in general are good in Catarrhs and enormous flowings of the Serum, as Amber; so that we have observed such diverting things, as the Essence of Amber joined with a bezoardick and an anodine essence to have happily cured a Gonorrhœa; to this place appertain sudorificks of the Woods, as decoctions of Guaiacum, sassafras, bezoardicum minerale, &c.

For you are to note, that the Class of the lesseners of Seed is wide, and contains not only what induces Chastity in single Men; but what is due to the Vices, Fluxions and Ichorefcence of the Seed, and to vitious Seed that passes off in the room of the good; so that with due choice made, they are convenient in a simple Gonorrhœa, nocturnal Pollutions, virulent running of the Reins, enormous lust, and such like Symptoms, or what arises out of them; and in some respect for Women troubled with the Whites, or a gonorrhœa. As to

### *The Way of Applying them.*

1. *The virtue of things that lessen Seed doth varie according to the temperaments.* For as in general,

every Agent acts according to the thing it works upon; so when you read contrary things in Authors; as for example, sea Willow, Rue, Mint, &c. all of them do check libidinousness, and cause it, lessen Seed, and produce it, but this is to be attributed to the diversity of Bodies, that it works upon; so that *Hoffman* rightly says, that the Seed of agnus castus being often taken doth diminish Seed, and that only in hot Constitutions, but the contrary in cold ones; thus it is decided, when 'tis said that dry Mint diminishes Seed, but green increases it.

2. *Their force varies according to the nature of the Seed, and a striction or a consuming of the Seed be indicated.* All things are not convenient for all People; thus in nocturnal Pollutions, Acids, the aqueous and styptick are convenient, only this last must be gentle; in a simple Gonorrhœa, Acids and nitrous things, as also lixivials, however some Practitioners deny it, are good and proper; in a virulent one, Mercurials in the beginning, but Acids and nitrous things are not convenient; nitrous things do powerfully take away lust, but are bad in fluxes.

2. *In lessening of Seed you must see, that you do not run to extremes.* So that in general Wormwood, lead Medicaments, and others above mentioned, are scarce of any use in married People: and you must deal warily with them in young People, and such as are troubled with nocturnal Pollutions; for here that of *Horace* is true, *Naturam expellas furca licet usque recurrerit*, that is, *Nature returns do what you can to throw it out.* Nocturnal pollution is a disease of Age, so that the Seed, its fury, and acrimony must be abated, but the Seed must not be quite extinguished, for those that lead monastick lives, what ever they do to lessen and destroy

stroy virility, do suffer nocturnal Pollutions and Gonorrhœa's, so a total destruction of the Seed, ( unless it be by gelding ) must be injurious to the Body. We knew one 70 years old, who having hot Seed, was from his youth to that age, troubled with nocturnal Pollutions, yet had many Children; we have known also a married Shepherd to dye by a flowing of the Seed.

4. *Mercurials do rather advance, than check the flux of Seed.* So that we observe after them, and also after purgers, that the flux doth always increase; and when Mercury is given in the beginning of a virulent Gonorrhœa, it rather cleanses and diverts, than binds; so that Mercury is very good to cleanse venereal Ulcers, as of the seminal Vesicles, &c. and so to consolidate them by taking away the impure Acrimony, but if you work with Mercurials altogether, it will be very vain. So that having premised these, you must add strengtheners, as of Acrimony, Amber, &c. which confirm the Parts, take away Acrimony, and hinder the Flux.

5. *You must not trust to external Oyls to consume and hinder Seed;* for these do more relax the Parts, and so promote the Flux, rather than otherwise, so Mesue's Oyntment of Roses, the cooling Oyntment of Galen, the Oyl of Hemlock, &c. have sometimes their use, especially the Loins being anointed with them, but you had better insist upon Internals than use these, nor doth it avail any thing to apply them to the Stones; not to mention that they also heat the Parts.

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 BOOK II. SECT. II.
 

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## CHAP. XV.

*Of Stanchers of Blood.*

IT remains, that we speak of Stanchers of Blood, whose excretion is in all cases preternatural, unless it be that of the Menses; therefore supposing, that some time great Fluxes of Blood do happen;

1. *Either by the moveable or Blood it self*, as when 'tis too much rarefied by lixivial Salts, sulphureous Particles or volatile; so that its Tone is relaxed, and the fibrous Parts dibilitated, and seeks out a new space, as the Sea in its flowing over-runs the Banks; and the Pores also dilated by Heat, and the saline Parts do lay the Vessels open, of which we have examples in Fevers, in which the Heat and volatile Parts do often cause Hemorrhages; and in saline Diseases without any Fever, where either a fixed or volatile Alkali abounds, as in the Scurvy. For the scorbutical, especially if far gone, are very obnoxious to such Fluxes.

2. *Or by reason of the containing and conveying Vessels*, as they send out, and are not able to contain the vital Nectar, but suffer it to pass off by some opening erosion or gaping, whether spontaneous

neous or not, as in Wounds, out of which such Quantities flow sometimes, that it endangers life it self; or when a due space for Motion is denyed by obstructions, and the Blood doth therefore burst out; As *Lower* gives an example of a young Woman, who having been troubled with Hemorrhages for six years, was at last cured by steel Medicaments.

So that as in general they are stanchers, that check the flowing Blood, and reduce it to its due limits; so they either *respect the Blood it self*, as under *ebullition and rarefaction*, as *precipitants*, such are the terreous of all kinds, Corals, the Blood-stone, &c. or *aqueous and cooling qualifiers*, as Waters of Shepherds-purse, Plantane, Purslane, Water-Lily and Frog-spawn, the Phlegm of Alum, &c. or *coagulating and congealing Acids*, as Tincture of Roses, of Violets, and the acid Spirits. Thus have we cured scorbutical Hemorrhages with the alone use of Spirit of Vitriol joyned with Tincture of Violets, for acids do obtund and invert the more volatile and moveable Particles; and fix and concentrate the too active Particles, and so hinder a deluge.

*So also incrassatives and astringents of ichorousness.* As when the Blood is too watery, serous, acrimonious and fluxile, then you are to expect help from roboratives, astringents, and those that do concentrate both inward and outward. Thus almost all Red-roots stanch Blood, Tormentil, Snake-weed root, Alcanna; so *Hernius* his Powder is good against all such Fluxes, especially in breaking of a Vein, which Powder is made thus. Take white Henbane seed, white Poppy seed of each ʒi. Blood-stone, red Coral of each ʒss. Camphire ʒss. powder them, and give morning and evening ʒss. he some-

sometimes adds terra Lemnia, and Conserves of Roses, and makes an Electuary. So our styptick Powder, crocus martis astringens, terra sigillata, and the antiphthical Tincture of *Gramannus* ( which we have often used with success ) do mightily stanch Blood ; the Tincture also of Sulphur, and of Vitriol, the Blood-stone, Crystals of Lead, sperniola Crollii, and Syrup of Coral are very good.

So also *fixers*, as opiates, the common helps of all Fluxes, either alone or with astringents, as the anodine Magistery, laudanum opiatum, &c.

Externally *revellents* are useful, as Blood-letting in the adverse Part, dry Cupping-glasses to the Neck, which is the arcanum of some late Physicians, Ligatures of the extream Parts, the Arms, Feet, Fingers, &c. that the violent motion may be retarded.

As also *coolers*, such as actually cool, and are repellents; or potentially, as Oxycrate, or a mixture of Vinegar and Water applyed to the Neck or Stones. So it is an excellent thing, that *Simon Paulus* commends, he says, that Starch mingled with Bole-Armen. and the White of an Egg spread upon Tow so large, that it may reach from the Coronal suture to the root of the Nose, just over that part of the dura Matter, which is called the *falx*, has by often experience stop'd violent Fluxes; so it is known, that sudden terrors, as they drive the Blood from the Circumference to the Center, do stop great Hemorrhages ; some cases there are in which Faintings stop the Blood, as that famous example of the bleeding of *Agésilas* in *Xenophon*, which was stop'd by that means. And *Hoferus* says, that there is not a more certain Remedy in Hemorrhages, especially those of the Nose, than

a sudden application of Water, Vinegar or Ice to the hinder part of the Neck.

So *astringents* and *compressers* do the same, as the Blood-stone, the Jasper-stone, the Cornelean, and others both by actual, cold, and potential constriction from Chalybeate and terreous Particles, which are held in the Hand, or to the Arm-pits. So Cockle seed held under the Tongue for some time, helps in light Cases, but not grievous Fluxes. So *Rolsineus* his secret was, either a dried Toad, or his Bones carried under the Arm-pits, the tops of the Bones were cut off, that they might not be known. So Money first cooled in Water and closely tyed to the Fore-head to cool and compress the Vessels. To this place you may refer many other Topicks, Pultisses, Amulets, &c. Thus *Borellus* doth mightily commend common Nettle stamped, and put to the Palms of the Hands, and Soles of the Feet, with other Medicaments which may be seen in his 1. *Cent. obs.* 95.

Or they respect the Channells, and the ends of the Vessels, which being any way opened, it is necessary that the Blood should flow out; the consolidants, astringents and glutinatives which we have mentioned are proper *inwardly*, but *outwardly* the helps are,

1. *Compressers*; altho compression seems to be but a momentaneous help, which being removed, the Flux returns; yet the Lips being thus continually pressed together, Nature works a consolidation, so that it is a very good Remedy. Thus Wounds of cut Veins being continually tyed with a band, if it may be done, grow together. *Vern-lame* has a story of a Prince, whose Wound, after all things failed, was pressed by ones Thumb after another for two days, and so was cured, which could

could not be done without consolidation; so some Hemorrhages of the Arteries are principally cured by compression.

2. *Checkers of the Blood, and consequently such as fill up the Orifices*; as Puff-Mushrom, *Hornius* writes, that if this be soft and tough, and cut into thin slices, and these squeezed in a Press, it is sufficient to stop any Hemorrhage, especially if a stegnotick Powder be strewed upon it; to this place belong all the dryer sort of things; and *Grulingius* says, that in case of necessity the little flocks gathered in the Breaches by the wearing of Cloath has stopped the Blood; Another was cured only by Powder of Egg-shells blown into the Nose.

3. *Adstringents*, watery, austere and acid. Thus *Crollius* says, that Birch-tree Mushrooms shred to pieces do miracles in external Hemorrhages, and that it is more efficacious than crocus Martis astringens. So the Powder of the Tendrels of Vines doth wonderful things. *Riverius* praises Oxycrate drawn often into the Nose, and *Deodatus* extols it as a great secret.

Thus Florentine Lack being drawn into the Nose with or without Alum stops Hemorrhages. Ink also doth often do the same, or Tents of Alum dipped in it, which *Borellus* commends as a great secret. So the Water of Frogs-spawn with Alum drawn into the Nose, doth often help. So all Moss binds and stops Hemorrhages, but chiefly the Moss of a Man's Skull, both internally, and externally either carried under the Arm-pits, or put upon the Wound.

*Coagulatives* also, and such as reduce the Part into a kind of hardness. And that either gently; as *Mindererus* says, that almost all red Roots stanch Blood, and that every Blood stanches Blood, for 'tis glutin-



glutinous, and meeting the other Blood it mitigates it, and conglutinates the Vessels. So there is an elegant example in *Platerus* to this purpose, that a Malefactor having his Hands and Feet cut off, run his Arm into a fresh Wound made in a dunghill Cock, and the Hemorrhage was absolutely stop'd ; which was also tryed in a Finger that was bit off, with good effect. Thus the warm Blood of Animals is given, as Clysters to the dysenterical. So my Lord *Bacon* commends the putting of an amputated Member, or bleeding for any other cause, into other Animals, for the fresh Blood doth mightily draw the Blood off the Animal by consent, and swallow it up, so that it is it self stop'd, and flows back. So the hot Excrements of a Pig doth as it were coagulate the Blood. See *Rulandus Cent. 10. obs 57.*

Or strongly, such are those, that induce an eschar or hardness ; and they actual or potential. Thus *Willis* in his Book of Fevers, has an instance of a most violent Hemorrhage cured by the Vapour of the Blood falling upon hot Iron. So fire or cauterizing does by drying and burning the Blood, by contracting and shutting the Vessels do, when all things fail, as in the cutting off sphacelated Limbs. So *Platerus* says, that a Ball made of Wooll dipped in aqua fortis did stop an Hemorrhage of the Tongue.

To this you may refer the sympathetick Powder, upon which Blood dropping produces attraction, but this is not so certain, and hardly answers your expectations, but in slight cases.

Or they respect the free Passages of the Blood ; so that openers do improperly and mediately stanch Blood, by restoring the impeded circulation of the

the

the Blood, which we have observed to be true, and do much good in great Fluxes of the Menfes, and other Hemorrhages, as we have said elsewhere. We will now only add some few things concerning

### *The Way of Using them.*

1. *Blood stanchers are proper for a simple Hemorrhage; but in a complicated, they only partly cure.* Thus they have place in Hemorrhages of the Nose, Wounds, Arteries, Menfes, Hemorrhoids, breaking of a Vein, pissing of Blood, bloody Fluxes, &c. But if the Hemorrhage be joined with a Distemper, you must principally regard this. Thus a Dysentery or bloody Urine from the Stone requires proper things, and not only stanchers of Blood, but such as have respect to the Stone; and always have the greatest care to take away the Cause, which being removed the Hemorrhage also will be stop'd; nor are they good in all Fluxes, but only where astringent is properly indicated; as 'twere a madness to use stops by stypticks in a Pleurisie or bloody-spitting, the reason is the same in other cases.

2. *Topicks are to be applied, either where there is immediate need, or where the Blood may be most of all cooled.* For by the first way they may probably shut the Mouths of the Vessels by their immediate contact; and by the other allay the impetuous Motion of the Blood. Thus, (to give a summary account) they are applied to the sides of the Head, to the Fore-head, under the Tongue, to the hind part of the Neck, to the Nostrils, to the Neck under the Arm-pits, to the sides up-  
on

on the Liver and Spleen, to the Testicles, and the Soles of the Feet.

3. *Cauteristics* and *corrosives*, as *sublimated Mercury*, *Arsenick*, and the *Caput mortuum of Aqua fortis* are not much to be used to stop Blood. OF this *Mindererus med. militar. p. m. 323.* is worth your reading; as well because they irritate the membranous Parts of the Wound, as because they induce great Symptoms, and often Death it self. They do indeed at first bring the Veins together, and bind them, because of their pontick and styptick Particles, but afterward they corrode the Part. But note, that a milder sort may be sometimes well used, as *Colcothar* and *Aqua fortis*, but in lesser Vessels and Openings rather than greater ones. But this is not to be extended (as some do) to a hot Iron, for fire, beside that sudden contraction that it makes, is harmless, or at least its effects are easily corrected and amended.

4. *Grievous Ligatures* are not profitable when the Blood is *impetuous*. For however gentle Ligatures of the extreme Parts, and Constrictions of the Fore-head do somewhat retard the Blood, and constraining of the Vessels is not for nothing, as by cold things, Stones, and the like held in the hand, under the Arm-pits, &c. Yet if you exceed in these Constrictions, and go beyond what a discreet Physician should do, you shall be so far from hindering the Flux, that it will grow more violent, by reason, that the space is made narrower. *Heer. obs. 13. p. 170.* is worth the reading, as to these things. To these you may refer a strong stopping of the Nose, for by this means you will only cause a regurgitation into the Mouth: and it

(122)

s the same as if you would stop a Vessel of new Wine, that is in fermentation. It is better to take away, and precipitate that fury, which being done, you may with more ease stop the Flux.

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**FINIS.**

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# THE INDEX.

## A.

- A** Cids, whether they be cold or hot. p. 28, 29.  
 Alexipharmacks, p. 227, 228, 229, 230.  
 the Way of applying them, p. 230, 231, 232.  
 special Alexipharmacks or Antidotes, p. 233, 234,  
 235, 236.  
*Aliments*, how they differ from Medicaments and Poi-  
 sons. p. 1.  
*Anodines and Narcoticks*, p. 276, 277, 278, 279,  
 280, 281, 282.  
 the Way of Applying them, p. 282, 283, 284, 285.  
*Antimony*, when it Vomits and Purges, and when not,  
 p. 193.  
*Antidotes*, vide *Alexipharmacks*.  
*Antivenereals*, p. 307, 308, 309, 310, 311.  
 the Way of Applying them, p. 311, 312, 313.  
*Aperitives*, their Way of Acting and Virtue, p. 61.  
 of what Parts they chiefly consist, ibid.  
 when indicated, p. 62, 63, 64.  
 of what Kinds they are, p. 66, 67.  
 how and when to be used, p. 67, 68, 69, 70.  
*Aphrodisiacks*, or Helps for Venereal Performances,  
 p. 301, 302, 303, 304.  
 the Use and Way of Applying them, p. 305, 306, 307.  
*Astringency*, when indicated, p. 48, 49, 50.  
 Astring-

## The Index.

*Astringents,* p. 48.  
*their Nature and Use,* p. 51, 52, 53, 54, 55, 56,  
 57, 58, 59, 60.  
*Attractives, their Indican,* p. 77, 78.  
*how they Act,* p. 79, 80.  
*their particular Uses,* p. 81, 82.  
*the Way of using them rightly.* p. 85, 86.

### B.

**B**itter Things, whether cold or hot, p. 30, 31.  
*Blisterers,* p. 82.  
*Blood, congeal'd and grumous how to be dissolved,*  
 p. 255, 256, 257.  
*Blood-Strachers,* p. 314, 315, 316, 317, 318, 319, 320.  
*the Way of Using them,* p. 320.

### C.

**C**athartives, p. 243, 244, 245.  
*the Way of Applying them,* p. 245, 246, 247.  
*Cantharides, whether they hurt the Bladder,* p. 82, 83.  
*how to be applied,* p. 83, 84.  
*whether Vinegar is to be mixt with them.* p. 84.  
*Cauticks and Corrosives, their Indican, when to be used,*  
*and how, &c.* p. 87, 88, 89, 90, 91, 92, 93, 94.  
*Colour of Simples, whether it shows their Nature and*  
*Temper,* p. 10.  
*Cold Things, what they are,* p. 26, 27.  
*how they cool according to the four Degrees,* p. 29.

### D.

**D**ilaphoreticks, *their Way of acting,* p. 237, 238,  
 239.  
*the Way of applying them,* p. 240, 241, 242.  
*Digestives, vide Preparatives.*  
*Dissolvers of congeal'd Blood, vide Blood.*  
*Diureticks, their Nature, and how they act,* p. 58, 59,  
 260, 201, 262.  
*Dry Things, what they are,* p. 34.  
 E.

# The Index,

## E.

- E** Meticks, vide Vomitories.  
 Emmenagogues, p. 262, 263, 264, 265.  
 the Way of applying them, p. 265, 266, 267, 268.  
 Emollients, why so called, p. 37.  
 when to be used, p. 38, 39, 40, 45, 47.  
 how they differ from Suppuratives, p. 41.  
 of what Nature they are, p. 42, 43.  
 Epuloticks, what they are, p. 105.  
 in what Cases to be used, and how, p. 106, 107.  
 Errhines, vide Sternutatories.

## F.

- F** Acutries of Medicines how they are to be known.  
 p. 9, 10, 11, 12, 13, 14, 15, 16.  
 how to know them by the Taste, p. 16, 17, 18, 19.  
 of the hot Temper, p. 20, 21, 22, 23, 24, 25.  
 of the cold Temper, p. 26, 27, 28, 29, 30, 31.  
 of the moist and dry Tempers, p. 32, 33, 34, 35, 36.

## G.

- G** Lutinatives, what they are, when indicated, and  
 how to be applied, p. 103, 104.

## H.

- H** Air, what Things unroot it, p. 95, 96.  
 Hot Things, why they sometimes cool the Blood,  
 p. 6.  
 Hot Things in the first Degree, what they are, p. 23.  
 in the second Degree, ibid.  
 in the third Degree, p. 24.  
 in the fourth Degree, p. 25.

## I.

- I** Ncrassatives, p. 71.  
 what are the Indicants of them, ibid.  
 in what Cases to be used, p. 72.  
 way

# The Index.

*way of Application,*  
*Inducers of Scars, vide Epuloticks.*

P. 73.

K.

**K**illers of Worms, vide Worms.

L.

**L**entives  
their Way of Working, p. 187, 188, 189. p. 186.

M.

**M**ansions of Degrees, what they are, p. 22.  
Masticatories, p. 292, 293, 294, 295.  
the Way of applying them, p. 296, 297, 298, 299, 230.

*Medicament, its Definition,* p. 1.

*how Medicaments differ, and how divided,* p. 2.

*their Principles of Acting,* p. 3.

*Medicaments against Burnings, their Nature, &c.*  
p. 109, 110, 111.

*Medicaments appropriated to the Head, from* p. 112,  
to p. 119.

*to the Eyes,* p. 120, 121, 122.

*to the Ears,* p. 123, 124, 125, 126.

*to the Breast,* p. 127, 128, 129, 130.

*to the Heart,* from p. 131. to p. 138.

*to the Stomach,* from p. 139. to p. 145.

*to the Liver,* p. 146, 147, 148, 149, 150, 151, 152.

*to the Spleen,* from p. 153. to p. 159.

*to the Bladder and Kidnies,* p. 160, 161, 162, 163,  
164, 165, 166.

*to the Womb,* from p. 167. to p. 174.

*to the Joints,* from p. 175. to 180.

*Milk, what Things encrease it,* p. 269, 270, 271, 272,  
273.

*the Way of using and applying them,* p. 274, 275.  
Adoi ff



## The Index.

*Mist Things, what they are, and how they act, p. 32,  
33.*

### N.

**N**ephriticks, vide *Medicaments appropriated to the  
Reins and Bladder.*

*Nitrous Things, why they cool.*

p. 29.

### O.

**O**peners, vide *Aperitives.*

*Opiates, wherein their Virtue consists, p. 280, 281.*

*Opium,*

p. 282, 283, 284.

### P.

**P**roticks, what they are,

p. 108.

*Preparatives,*

p. 181, 182, 183.

*their Way of Acting,*

p. 184.

*the Way of Applying them,*

p. 184, 185, 186.

*Purgers, how they act, p. 190, 191, 194, 195, 196.*

*unusual Purgers, or such as are seldom used, p. 198,*

199, 200, 201, 202, 203, 204.

*usual and select Purgers, p. 205, 206, 207, 208, 209,*

210.

*of other Purgers,*

p. 211, 212, 113.

### Q.

**Q**ualities, how they are divided, and what they  
are,

p. 3, 4, 5, 6.

*Occult, whether there be any such, and how divided,*

p. 7.

### R.

**R**emedies suggested by brute Beasts,

p. 13.

*Repellents,*

p. 74.

*Indicants of Repellents,*

ibid.

*their Nature and Quality.*

75, 76.

### S.

**S**alivating Things, vide *Masticatories.*

*Signatures, whether they show the Nature and Vir-*

tue

## The Index.

*true of Simples,* p. 11, 12.  
*Smells or Scents, what they are, and what they testifie,*  
*as to the Nature of Things,* p. 13, 14, 15.  
*Stanchers of Blood, vide Blood-Stanchers.*  
*Sternutatories,* p. 186, 287, 288.  
*the Way of using them,* p. 288, 289, 290, 291, 292.  
*Suppuratives, in what Cases convenient.* p. 97.

### T.

**T***asts, what they are,* p. 16.  
*their particular Species and Virtues,* p. 17, 18, 19.  
*Temperate Things, what they are,* p. 20.  
*Traumaticks or Vulneraries,* p. 96.  
*when indicated,* p. 98.  
*their Nature and Use,* p. 98, 99, 100, 101, 102.

### V.

**V***enercal Performances, what Things help them, vide*  
*Aphrodisiacks.*  
*Vesicatories, vide Blisterers.*  
*Ulcers, whether they arise from Acids,* p. 103.  
*Vomitories, how they differ from Purgers,* p. 214, 215,  
 216.  
*why they work upward, and Purgers downward,* p. 215.  
*unusual Vomitories,* p. 217, 218, 219, 220, 221, 222,  
 223.  
*the usual and select,* 223, 224, 225, 226.

### W.

**W***orms, what Medicines destroy them,* p. 248,  
 249, 250, 251, 252.  
*how those Medicines are to be applied,* p. 252, 253, 254.

FINIS.

